

[illegible]

OLD DUBLIN

MIXED USE

76-82 S. HIGH ST
DUBLIN, OHIO 43017

PROJECT NO.	SHEET
DRAWN BY	CHECKED BY
REVISIONS	

COVER SHEET

G0.01



3 MASSING MODEL
S.E. CORNER



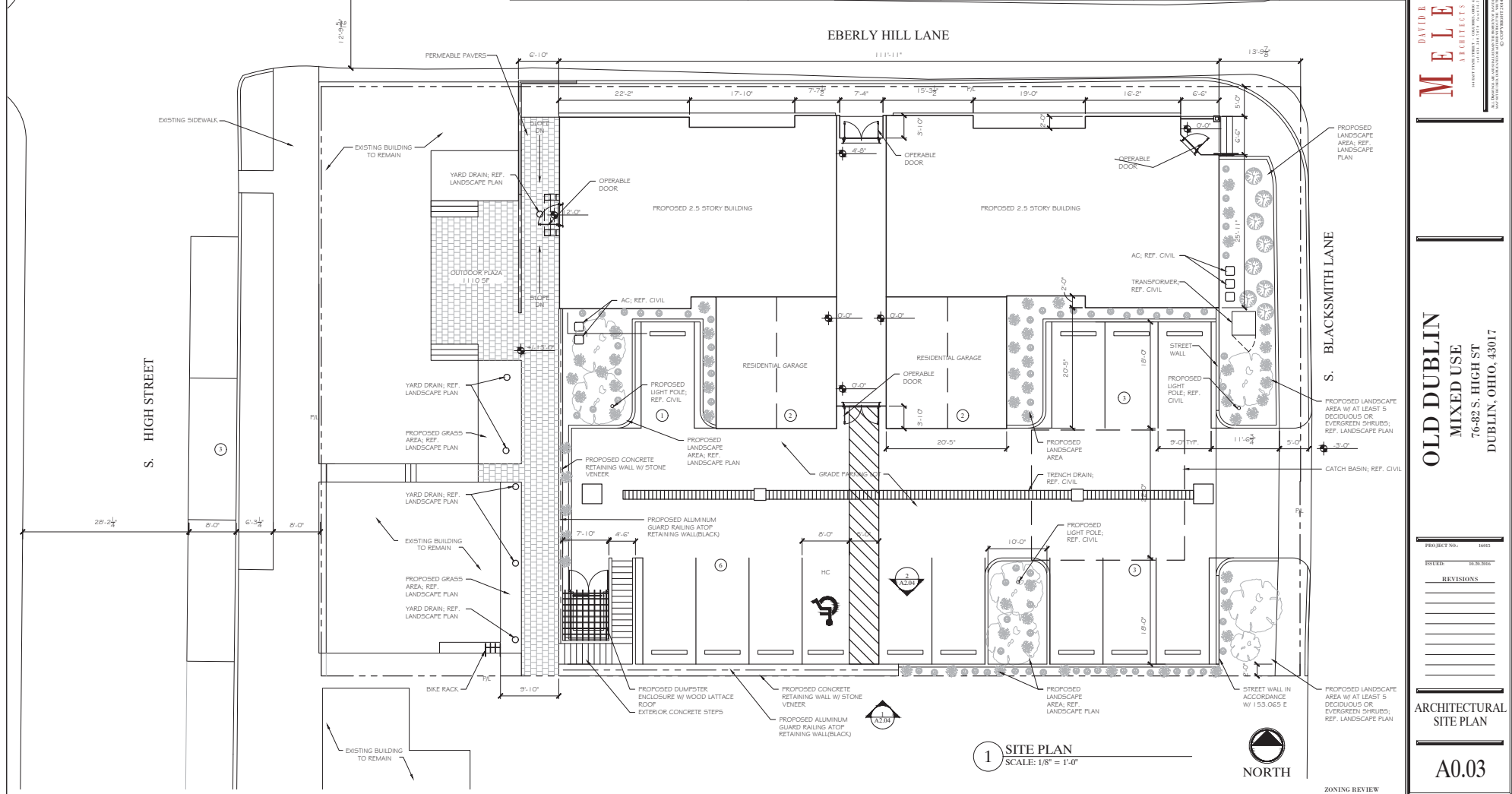
2 MASSING MODEL
S.E. CORNER



1 MASSING MODEL
N.E. CORNER

ZONING REVIEW

IMPERVIOUS COVERAGE		OPEN SPACE		BUILDING AREAS		VEHICLE PARKING DATA		BICYCLE PARKING DATA	
TOTAL LOT SIZE = 16,580 SF		USE GROUP: OFFICE		PROPOSED BUILDING		VEHICLE SPACES REQUIRED:		BICYCLE REQUIREMENTS:	
REQUIRED:		SIZE: 6,160 SF		FLOOR: 50 FT		2.5 SPACES PER 1,000 SF * 2,236 SF = 5.6 SPACES		RESIDENTIAL = 1 SPACE PER 2 UNITS	
PROVIDED:		REQUIRED: 1.5F OPEN SPACE PER 50 SF		GROUND FLOOR: OFFICE 2,236 GSF		2.5 SPACES PER 1,000 SF * 1,560 SF = 3.9 SPACES		OFFICE = 1 SPACE PER 10 REQUIRED VEHICULAR PARKING SPACES	
MAX. IMPERVIOUS = 65%		6,160 SF / 50 SF = 124 SF		2ND FLOOR: OFFICE 1,560 GSF		2 SPACES PER UNIT * 1 UNIT = 2 SPACES		TOTAL REQUIRED: 4 SPACES	
SEMI-IMPERVIOUS = 5%		TOTAL: 124 SF + 400 SF = 524 SF		2ND FLOOR: RESIDENTIAL 1,794 GSF		2 SPACES PER UNIT * 1 UNIT = 2 SPACES		TOTAL PROVIDED: 5 SPACES	
		PROVIDED: TOTAL: 1110 SF		3RD FLOOR: RESIDENTIAL 2,634 GSF		TOTAL: 22 SPACES			
				TOTAL: 8,826 GSF					
				EXISTING BUILDINGS					
				LOCATION: 50 FT					
				NORTH BUILDING: OFFICE 2361 SF		2.5 SPACES PER 1,000 SF * 2,361 SF = 6 SPACES			
				SOUTH BUILDING: OFFICE 794 SF		2.5 SPACES PER 1,000 SF * 794 SF = 2 SPACES			
				TOTAL: 3,175 GSF					
				GRAND TOTAL: 12,003 GSF					

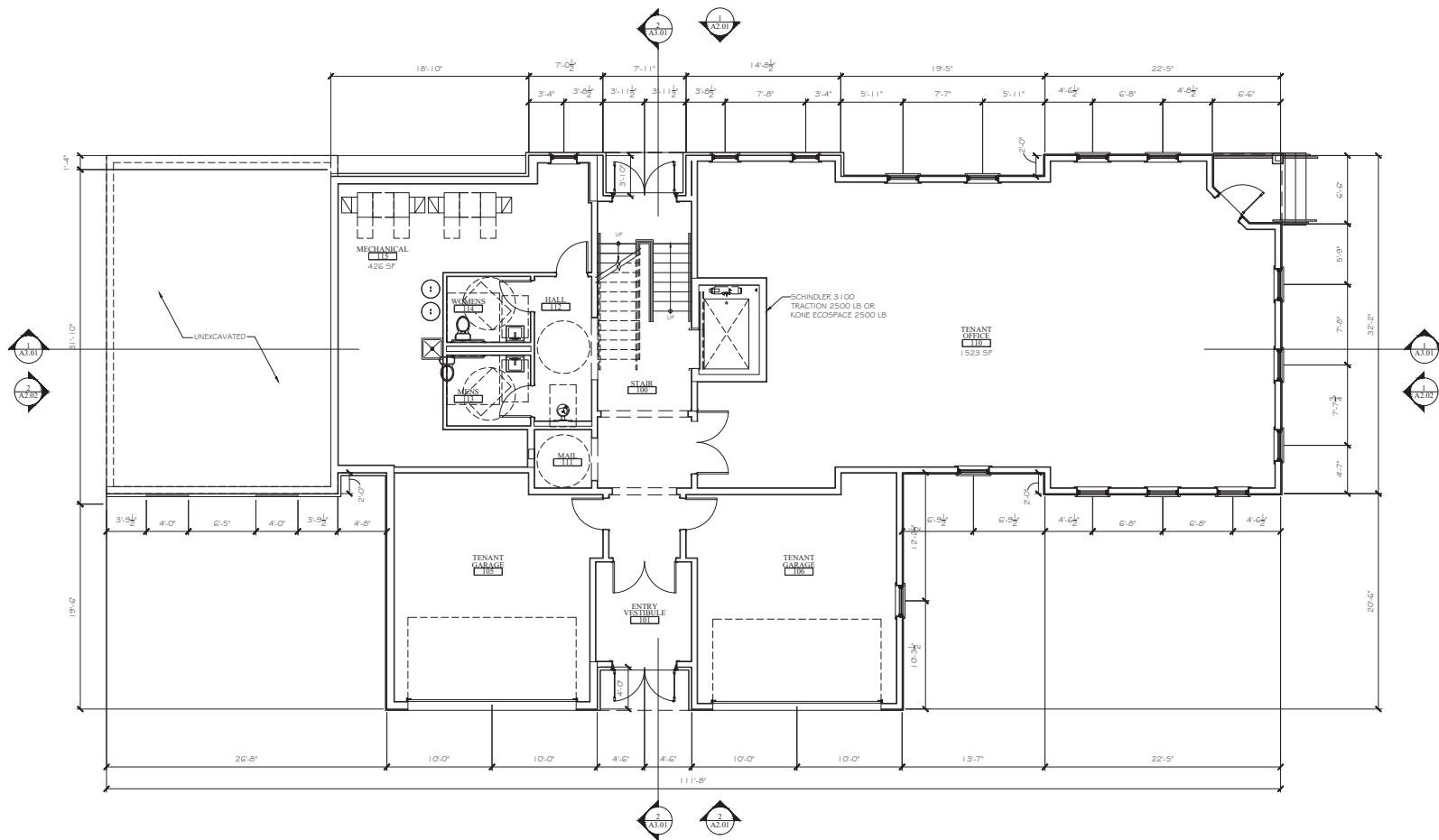


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OLD DUBLIN
MIXED USE
76-82 S. HIGH ST
DUBLIN, OHIO, 43017

PROJECT No. 18803
ISSUED: 10.30.2014
REVISIONS
ARCHITECTURAL
SITE PLAN

A0.03



1 GROUND FLOOR PLAN
SCALE: 3/16" = 1'-0"



ZONING REVIEW

OLD DUBLIN
MIXED USE
76-82 S. HIGH ST
DUBLIN, OHIO, 43017

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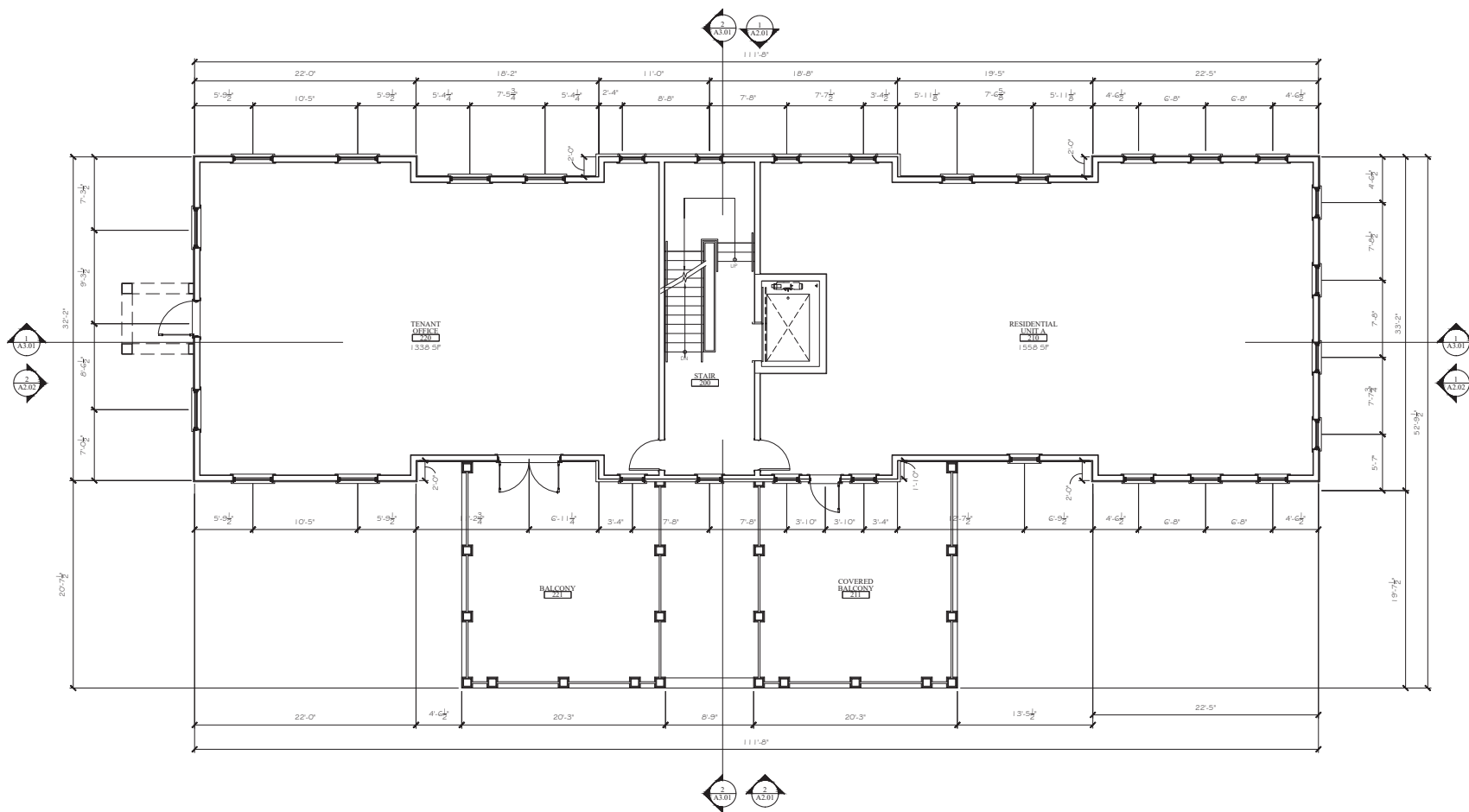
PROJECT NO. 18003

DATE: 06.26.2014

REVISIONS

GROUND FLOOR PLAN

A1.01

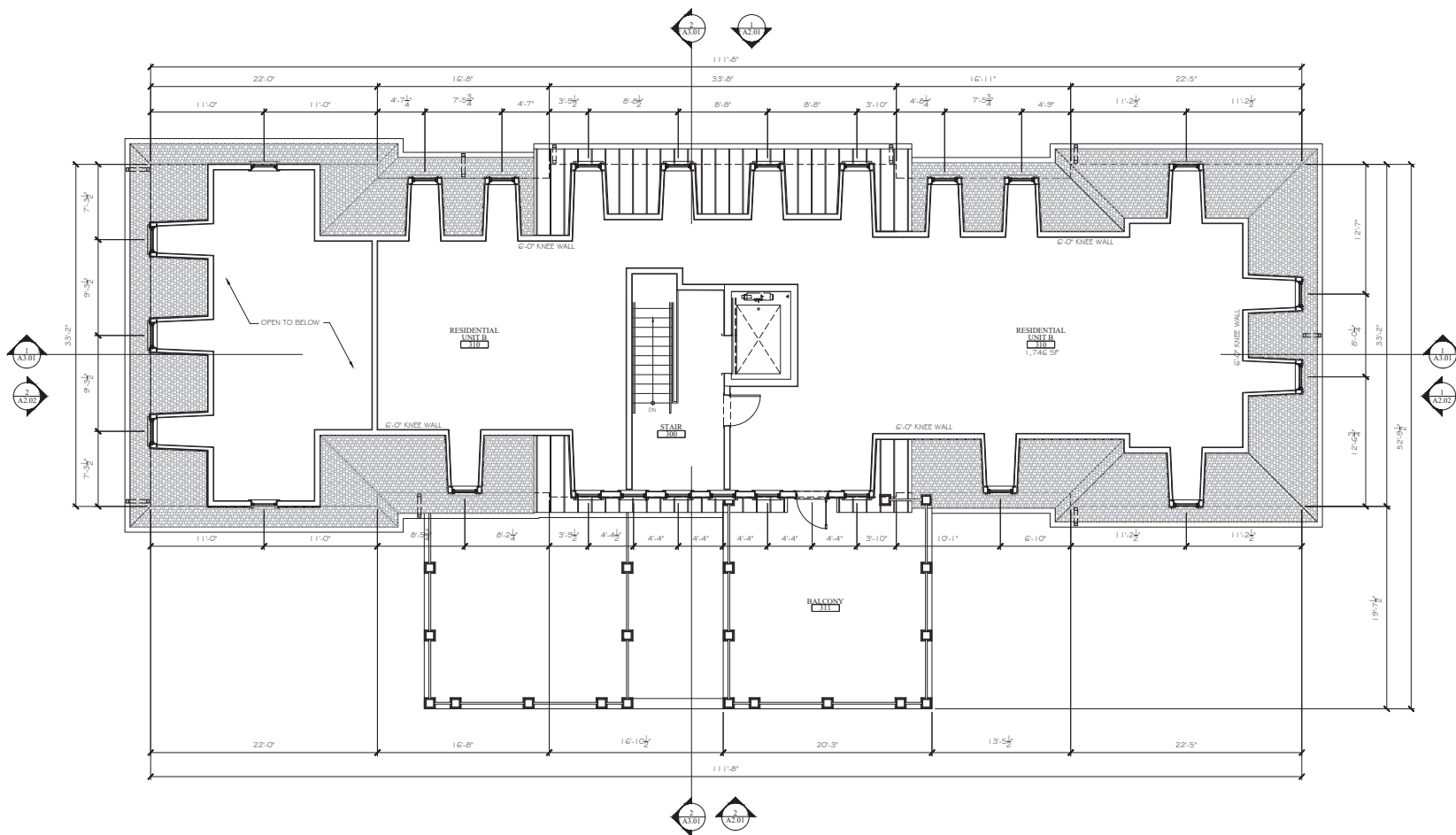


1 SECOND FLOOR PLAN
SCALE: 3/16" = 1'-0"



ZONING REVIEW

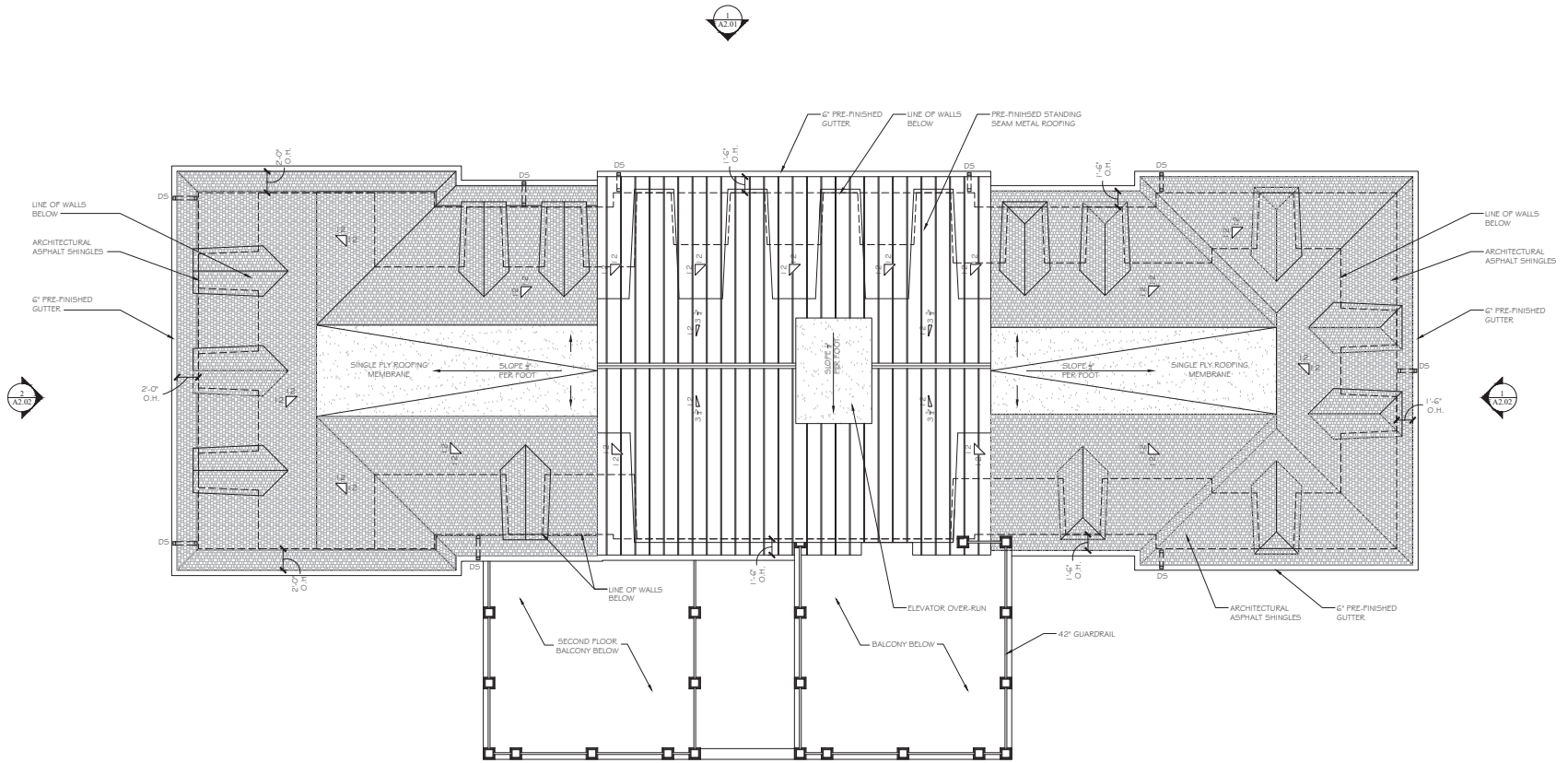
PROJECT NO.	10001
DATE	10.30.2014
REVISIONS	



1 THIRD FLOOR PLAN
SCALE: 3/16" = 1'-0"



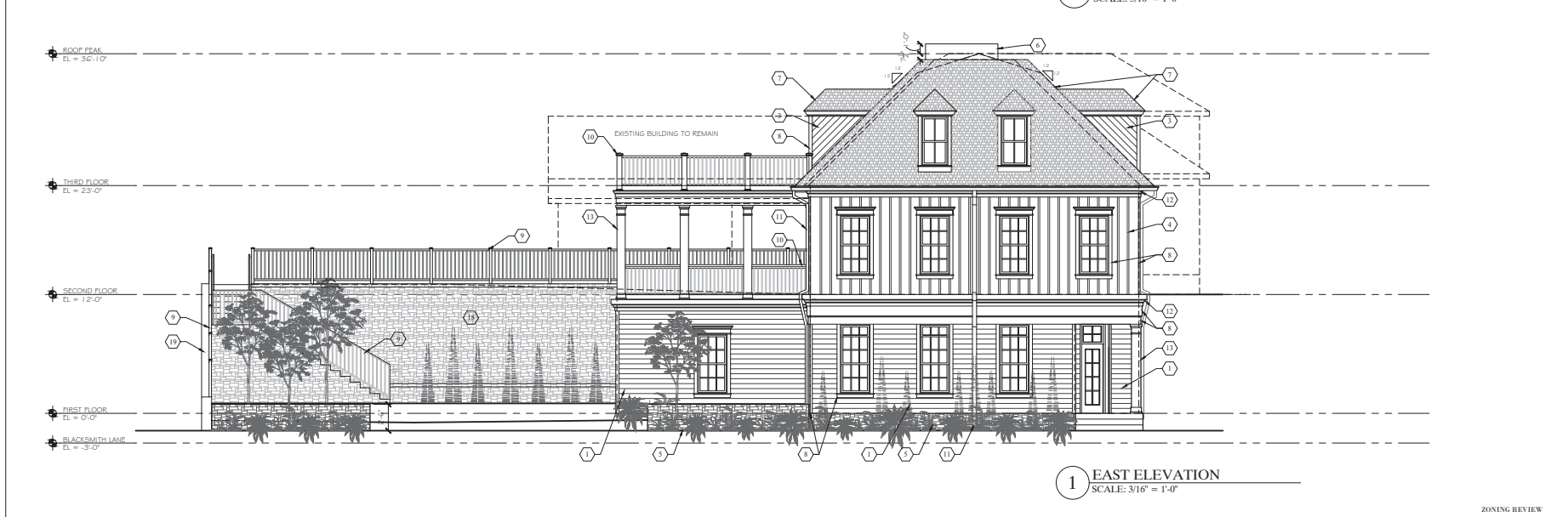
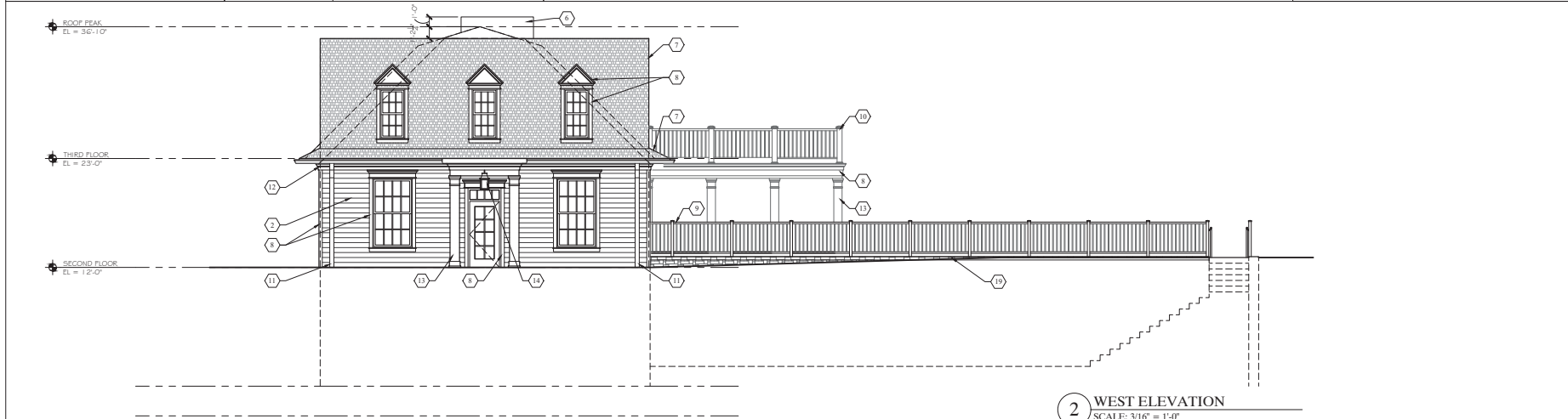
ZONING REVIEW



1 ROOF PLAN
SCALE: 3/16" = 1'-0"



NOTES:	VARIANCES REQUESTED:	CODED NOTES	TRANSPARENCY DATA																														
<ol style="list-style-type: none"> ALL WINDOWS AND DOORS SHALL HAVE PROJECTING SILLS, TRIM, AND CROSSHEADS ALL GLAZING SHALL BE LESS REFLECTIVE THAN 20% ALL EXTERIOR DOORS SHALL BE OPERATIONAL TO THE PUBLIC ALL DRYER VENTS SHALL BE ON THE SOUTH FACADE 	<p>BRIDGE STREET DISTRICT DEVELOPMENT CODE SECTION</p> <p>§3.062.D.2.H.1</p> <p>GAMBREL ROOF AND FLAT ROOF REQUESTED IN ORDER FOR THE T.O. ROOF TO BE BELOW THE ROOF LINE OF EXISTING BUILDINGS ON SITE. NOT VISIBLE ON EAST OR WEST FACADES.</p> <p>§3.062.E.1</p> <p>JAMES HARDIE HARDIPLANK LAP SIDING SMOOTH AND HARDIPANEL VERTICAL SIDING ARE NOT PERMITTED PRIMARY MATERIALS BUT ARE COMMONLY USED IN THE AREA.</p> <p>ELEVATOR EXTENDS ABOVE BIDDIES PEAK.</p>	<ol style="list-style-type: none"> LAP SIDING SMOOTH "ARTIC WHITE", JAMES HARDIE OR EQUAL LAP SIDING SMOOTH "WOODLAND CREAM", JAMES HARDIE OR EQUAL LAP SIDING SMOOTH "EVENING BLUE", JAMES HARDIE OR EQUAL JAMES HARDIE VERTICAL SIDING SMOOTH "EVENING BLUE" GLEN-GERY OR EQUAL, LANDMARK STONE, "ASHFORD GLEN RIDGE" STANDING SEAM METAL ROOF GAF OR EQ. "CHARCOAL" ASPHALT SHINGLES TRIM BOARD SMOOTH "ARTIC WHITE", JAMES HARDIE OR EQUAL PRE-FINISHED ALUMINUM RAILING (BLACK) AZEK OR EQ. COMPOSITE RAIL SYSTEM, WHITE TO MATCH TRIM PRE-FINISHED ALUMINUM DOWNSPOUT AND GUTTER TO MATCH TRIM COLOR JAMES HARDIE OR EQUAL CROWN MOULDING "ARTIC WHITE" BUILT COMPOSITE COLUMN GLAD W/ HARDIE TRIM "ARTIC WHITE" EXTERIOR BUILDING LIGHTS; MINKA-LAVERY IRVINGTON MANOR LIGHTS OR EQUAL STREET WALLS W/ STONE VENEER GLEN-GERY OR EQUAL, ASHFORD GLEN RIDGE THRU-ROOF VENT DRYER VENT CONCRETE RETAINING WALL W/ APPLIED STONE VENEER GLEN-GERY OR EQUAL ASHFORD GLEN RIDGE PRE-CAST STONE CAP 8 CUBIC YARD DUMPSTER - REF. CIVIL DRAWINGS 	<table> <tr> <th>FLOOR</th><th>FACADE</th><th>REQUIRED</th><th>PROVIDED</th></tr> <tr> <td rowspan="4">2ND FLOOR</td><td>NORTH</td><td>20% MIN.</td><td>21.0%</td></tr> <tr> <td>SOUTH</td><td>15% MIN.</td><td>18.6%</td></tr> <tr> <td>EAST</td><td>20% MIN.</td><td>20.8%</td></tr> <tr> <td>WEST</td><td>15% MIN.</td><td>18.9%</td></tr> <tr> <td rowspan="4">GROUND FLOOR</td><td>NORTH</td><td>40% MIN. STOREFRONT</td><td>31.1%</td></tr> <tr> <td>SOUTH</td><td>15% MIN.</td><td>13.9%</td></tr> <tr> <td>EAST</td><td>40% MIN. STOREFRONT</td><td>33.4%</td></tr> <tr> <td>WEST</td><td></td><td></td></tr> </table> <p>*STREET FACING GROUND FLOOR MEASURED BETWEEN 2' & 8' PER BSC DEVELOPMENT CODE.</p>	FLOOR	FACADE	REQUIRED	PROVIDED	2ND FLOOR	NORTH	20% MIN.	21.0%	SOUTH	15% MIN.	18.6%	EAST	20% MIN.	20.8%	WEST	15% MIN.	18.9%	GROUND FLOOR	NORTH	40% MIN. STOREFRONT	31.1%	SOUTH	15% MIN.	13.9%	EAST	40% MIN. STOREFRONT	33.4%	WEST		
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*NOTE: BIDDIES ROOF PEAK = 36'-10"																																	



ZONING REVIEW

DAVID B

MELECA

ARCHITECTS LLC

WE SERVE YOU WITH INTEGRITY, PASSION AND CREATIVITY

10000 W. 12TH AVE. SUITE 100, DENVER, CO 80202

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PROJECT NO. 18803

ISSUED: 10.30.2024

REVISIONS

BUILDING ELEVATIONS

A2.02

OLD DUBLIN

MIXED USE

76-82 S. HIGH ST

DUBLIN, OHIO, 43017

1

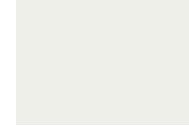
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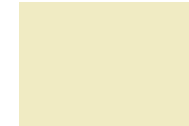
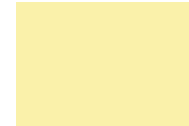
6 STANDING SEAM METAL ROOF



7 INDEPENDENCE ASPHALT SHINGLES
"GEORGETOWN GRAY"



1 # 8 JAMESHARDIE SMOOTH "ARTIC WHITE"



2 JAMESHARDIE SMOOTH "WOODLAND CREAM" OR "SAILCLOTH"



3 # 4 JAMESHARDIE SMOOTH "EVENING BLUE" OR "BOOTHBAY BLUE"



5 GLEN-GERY, LANDMARK STONE, "ASHFORD GLEN RIDGE"

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*NOTE: BIDDIES ROOF PEAK = 36'-11"																																	

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OLD DUBLIN
MIXED USE
76-82 S. HIGH ST
DUBLIN, OHIO, 43017

PROJECT NO.: 18003
DATE: 10.30.2024
REVISIONS

BUILDING ELEVATIONS

A2.04

ZONING REVIEW

Architectural section drawing of a three-story building. The drawing shows the interior layout with rooms labeled: ENTRY VESTIBULE, STAIR 101, STAIR 102, STAIR 103, and RESIDENTIAL UNIT. The building has a gabled roof with a peak elevation of 36'-1 1/2". The floor levels are marked on the right: FIRST FLOOR (EL. = 0'-0"), SECOND FLOOR (EL. = 12'-0"), and THIRD FLOOR (EL. = 23'-0"). The total height from the first floor to the roof peak is 36'-1 1/2". The drawing also shows exterior walls, windows, and doors. The title "BUILDING SECTION" is at the bottom center.

ZONING REVIEW

A3.01

PRMN/PRMS/PRMD

Eberly Hill Site Civil Materials 01232017

Promenade™



- Features highly efficient, exclusive MicroCore™ technology
- Upgrade kits available
- DLC pending
- Features exclusive LifeShield® Protection System
- 0-10v dimming capabilities

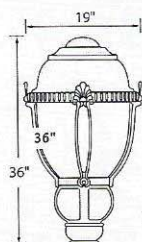
- All cast aluminum construction and stainless steel hardware
- IP66
- Powder coat finish in 13 standard colors with a polymer primer sealer

ORDERING INFORMATION

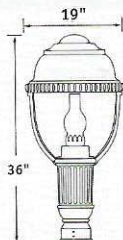
PRMN/PRMS/PRMD							
MODEL		COLOR TEMPERATURE		COLORS		OPTIONS	
PRMN	Promenade™	48LED-3K	Warm White, 3000K output	AWT	Arctic White	CHC	Copper hood cover. <i>PRMS & PRMN only.</i>
PRMS	Promenade™	48LED-4K	Neutral White, 4000K output	BLK	Black	BHC	Brass hood cover. <i>PRMS & PRMN only.</i>
PRMD	Promenade™	48LED-5K	Bright White, 5000K output	MTB	Matte Black	BPS	Brass color painted struts. <i>PRMN only.</i>
UPGRADE KITS		DRIVER		RAL/ PREMIUM COLOR		CHM	
PRMN-LK, PRMS-LK, PRMD-LK		120 thru 277 volt		MDG		LDL	
Distribution (Class 2, 120 thru 277 volt)		700	700mA drive current, 112 watts	ATG		PT5	
T2, T3, T4, T5, TL, TR	IES Type 2, 3, 4, 5, 45° Left, 45° right distribution	450	450mA drive current, 72 watts	LGY		MAT	
Color Temperature		DISTRIBUTION		CUSTOM COLOR		FTG	
48LED-3K	Warm White 3000K diodes	T2	Type 2	Please provide a color chip for matching		HSS	
48LED-4K	Neutral White 4000K diodes	T3	Type 3			LDL	
48LED-5K	Bright White 5000K diodes	T4	Type 4			FTG	
Ballast/Driver		T5	Type 5			SCP	
700	700 milliamp drive current, 112 watts	TL	45° Left			PCA-C	
450	450 milliamp drive current, 72 watts	TR	45° Right			EPA-C	

SCP (Sensor Control Programmable) pole accessory is available to provide occupancy detection for outdoor applications meeting California Title 24. For complete spec sheet and ordering information, visit www.aal.net/products/sensor_control_programmable/

DIMENSIONS



PRMN
WT: 38 lbs. EPA: 2.75 IP: 66
Slip over 4" O.D. pole



PRMS
WT: 38 lbs. EPA 2.75



PRMD
36" x 19" DIA
WT: 34 lbs EPA: 2.10

Please visit www.aal.net for mounting options.

PERIOD



MOUNTING (FGS)	
Wall Mount	
WMA1M	WMA56
WMA1L	WMA57
WMA55	
Pole Mount	
TRA1M	TRA56
TRA1L	TRA57
TRA55	



Providence® Medium LED

PERIOD



- MicroCore™ technology
- Canted design provides even illumination with less glare
- Upgrade kits available
- 0-10v dimming ready
- Surge protection included
- Type 2, 3, 4, 5, Left, Right distributions
- IP66 optics
- DLC listed
- Powder coat finish in 13 standard colors with a polymer primer sealer

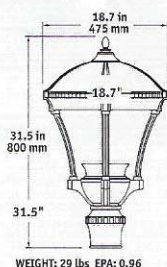
ORDERING INFORMATION

PROV											
MODEL		COLOR TEMPERATURE		COLORS		OPTIONS					
PROV	Providence medium housing scale	32LED-3K	Warm White, 3000K output	AWT	Arctic White	SPK	Decorative cast aluminum spikes on the top and bottom of the four vertical struts.				
UPGRADE KITS - PRO-LK		32LED-4K	Neutral White, 4000K output	BLK	Black	PFN	Cast aluminum finial painted a brass color.				
Distribution (Class 2, 120 thru 277 volt)		32LED-5K	Bright White, 5000K output	MTB	Matte Black	BPS	Cast aluminum struts painted a brass color - spikes also painted brass if option SPK chosen				
T2, T3, T4, T5, TL, TR	IES Type 2, 3, 4, 5, 45° Left, 45° right distribution	DRIVER		DGN	Dark Green	LDL	Lightly diffused lens. Frosted, flat tempered glass lens has a lightly diffused finish to minimize the lamp and reflector brightness				
Color Temperature		120 thru 277 volt		DBZ	Dark Bronze	CLR	Clear flat lens				
32LED-3K	Warm White 3000K diodes	700	700mA drive current, 75 watts	WRZ	Weathered Bronze	HSS	House side shield. Not for Type 5.				
32LED-4K	Neutral White 4000K diodes	450	450mA drive current, 48 watts	BRM	Metallic Bronze	PCA-T	Rotatable photocell housing-traditional				
32LED-5K	Bright White 5000K diodes			VBL	Verde Blue	PCA-C	Rotatable photocell housing-contemporary				
Ballast/Driver		DISTRIBUTION		CRT	Corten	SCP	Programmable motion control, factory default is 50%, requires pole				
700	700 milliamp drive current, 75 watts	T2	Type 2	MAL	Matte Aluminum						
450	450 milliamp drive current, 48 watts	T3	Type 3	MDG	Medium Grey						
Bezel Finish/Color		T4	Type 4	ATG	Antique Green						
Bezel available in 13 standard finishes and premium finishes (See Colors section)		T5	Type 5	LGY	Light Grey						
		TL	45° Left	RAL/ PREMIUM COLOR	Provide a RAL 4 digit color number						
		TR	45° Right	CUSTOM COLOR	Please provide a color chip for matching						

SCP (Sensor Control Programmable) pole accessory is available to provide occupancy detection for

SCP (Sensor Control Programmable) pole accessory is available to provide occupancy detection for outdoor applications meeting California Title 24. For complete spec sheet and ordering information, visit www.aal.net/products/sensor_control_programmable/

DIMENSIONS

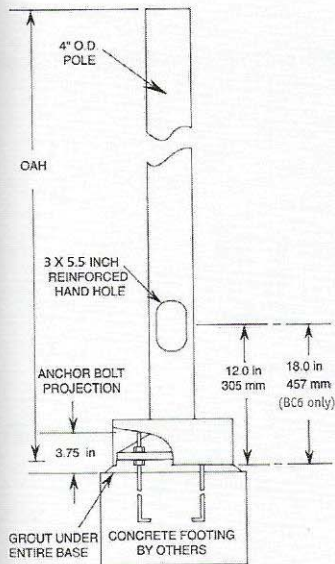


* DesignLights Consortium® Qualified



Please visit www.aal.net for mounting options.

PREMIUM POLES



FEATURES

AAL poles are designed for maximum strength to resist wind loads and perform with a wide variety of fixtures, arms and accessories. Whether the pole is ten feet or twenty five feet tall, the same robust design and structural integrity is built into every pole. At AAL, we design and manufacture aluminum poles for the best balance of strength, corrosion resistance, and longevity.

ROUND ALUMINUM POLES

CATALOG NUMBER	PR3	PR4	PR5
POLE HEIGHT(S)	8' to 10'	8' to 20'	10' to 25'
BASE DIAMETER	9"	9"	12.5"
POLE DIAMETER	3"	4"	5"

Fixture must be grounded in accordance with local codes or the National Electric Code. Failure to do so may result in serious personal injury. Poles should never be erected without the luminaire installed.

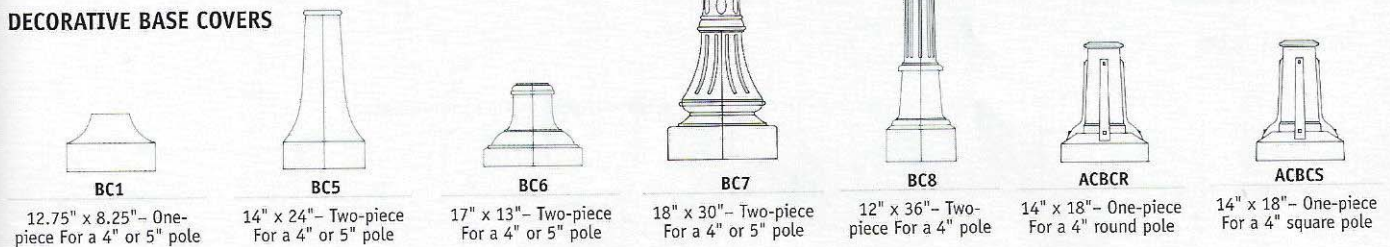
SQUARE ALUMINUM POLES

CATALOG NUMBER	PS3	PS4	PS5
POLE HEIGHT(S)	8' to 10'	8' to 20'	10' to 20'
BASE DIAMETER	7" square	9" square	14" square
POLE DIAMETER	3"	4"	5"

Warranty is voided if the pole is erected without the luminaire. Adequate drainage must be provided in concrete foundation or in the grout.

Please visit www.aal.net for complete pole specifications

DECORATIVE BASE COVERS



DECORATIVE POLES

	DB1	DB2	DB3	DB4	DB5	DB6	DB8	DB9	DB10	DB12
1	34"	51"	30"	42"	17"	36"	44"	27"	48"	39"
2	12"	20"	18"	18"	14"	15"	12"	12"	18"	16"
3	8' to 16'	10' to 25'	8' to 25'	8' to 25'	8' to 16'	8' to 16'	8' to 16'	8' to 16'	10' to 25'	8' to 16'
4	4"	5"	4" or 5"	4" or 5"	4"	4"	4"	4"	4"	4"

MULTI POST POLES

	2P	3P
1	—	—
2	12"	12"
3	8' to 20'	8' to 20'
4	(2) 3"	(3) 2"

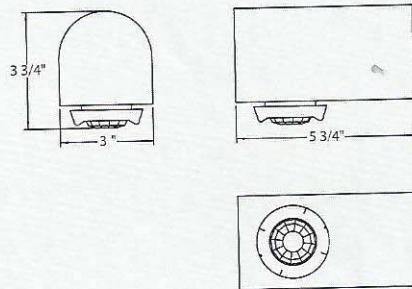
	C4P	T4P
1	—	—
2	12.5"	16"
3	8' to 20'	8' to 20'
4	(4) 2"	(4) 2"

REFERENCE

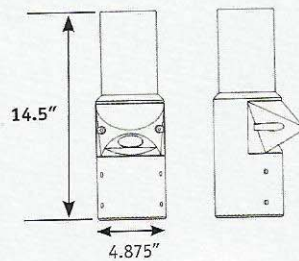
- 1 BASE HEIGHT
- 2 BASE DIAMETER
- 3 POLE HEIGHT(S)
- 4 POLE DIAMETER

Visit www.aal.net for complete details on weight and load limits as well as windloading information. Decorative poles are available with smooth round or fluted shafts.

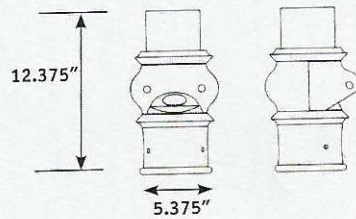
Sensor Control Programmable (SCP)



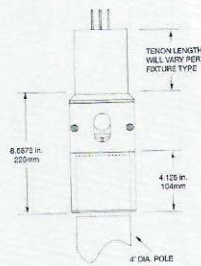
Egress Post Top Adapter



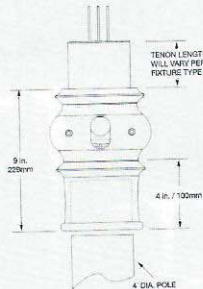
Contemporary Egress Adapter—EPA-C



Traditional Egress Adapter—EPA-T

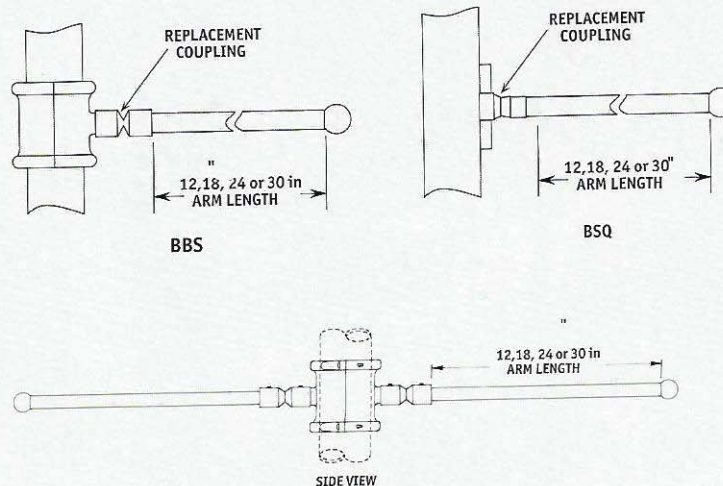


Contemporary Photocell Adapter—PCA-C



Traditional Photocell Adapter—PCA-T

Banner Arms



FEATURES

- All cast aluminum parts for the Beacon Slide luminaire shall be ASTM 356 marine grade alloy. The large upper shade shall be made from a one-piece aluminum spinning. The small top shade shall be removable for wiring access to the LED engine. The large upper shade provides direct-heat exchange between the LED light engine and the cool outdoor air.
- Each Beacon Slide luminaire is supplied with an Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stamped stainless steel bezel.
- Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load.
- The luminaire shall bear a CSA label and be marked suitable for wet locations.
- A thermal circuit, LIFESHIELD™, shall protect the luminaire from excessive temperature by interfacing with the 0-10V dimmable drivers to reduce drive current as necessary.

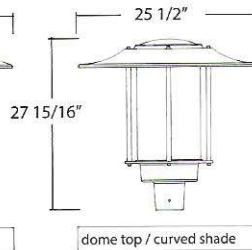
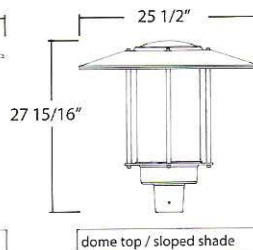
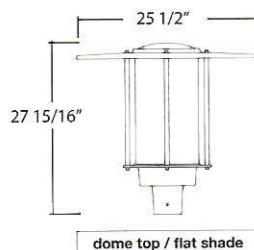
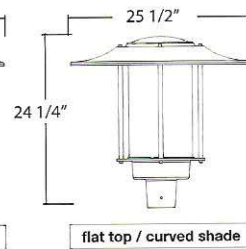
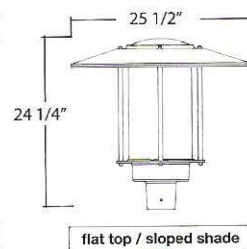
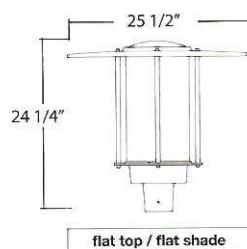


ORDERING INFORMATION

SLD									
MODEL	ENGINE-WATTS	OPTICS	VOLTAGE	CONTROL OPTIONS	STYLE OPTIONS	SHADE	COLOR		
SLD Slide	24NB-27 27 Watts 24NB-55 55 Watts 36NB-80 80 Watts ¹ 48NB-110 110 Watts ¹	T2 Type II T3 Type III T4 Type IV T5R Rectangular T5QM Sq. Medium T5W Round Wide	UNV 120-277V	GENI-XX Energeni ⁶	FLT Flat Top	FTS Flat STS Slope CTS Curved	BBT Basic Black Textured BMT Black Matte Textured WHT White Textured MBT Metallic Bronze Textured BZT Bronze Textured DBT Dark Bronze Textured GYS Gray Smooth DPS Dark Platinum Smooth GNT Green Textured MST Metallic Silver Textured MTT Metallic Titanium Textured OWI Old World Iron RAL _____		
LENS OPTIONS	CCT-COLOR TEMP	ELECTRICAL OPTIONS	STANDARD ELECTRICAL OPTIONS						
NN No Lens	5K 5000° K (std.) 4K 4000° K 3K 3000° K	PEC Button Photocell (specify voltage) 2PF Dual Power Feed ³	Lifeshield™ Thermal Protection 20K-Surge Protection ¹ Dimming Drivers						

¹ Not available with lens option² 24NB-55 max³ Not available @ 347/480V input⁴ Not available @ 347V input⁵ Requires lens⁶ When ordering Energeni, specify the routine setting code (example GENI-04). See Energeni brochure and instructions for setting table and options. Not available with sensor options.

DETAILS



Mediterranean

DECORATIVE

FEATURES

- The Village series is a unique collection of traditional acorn style luminaires that set the architectural tone for many of our cities today. This luminaire is made up of fully interchangeable components. For specification, select a MODEL, a LENS OPTION, followed by a CAGE, and finally a HOUSING, and finish with the lighting performance details specific to your project requirements.
- All cast aluminum components shall be low copper alloy A356. All extruded aluminum components shall be alloy 6061-T6, 6063-T5 or equal. All spun components shall be alloy 1070, 3002 or 1100.

3002 or 1100.

- The heavy spun aluminum dome shall be topped with a decorative cast aluminum finial (except Brighton). The dome shall be mechanically attached to the lens. The acrylic lens material shall be UV stabilized and impact resistant.
- An LED Bezel, is a one piece cartridge with, LEDs, optics, gasket and stainless steel faceplate. A thermal circuit, called LIFESHIELD™, shall protect the luminaire from excessive temperature by interfacing with the 0-10V dimmable drivers to reduce drive current as necessary.

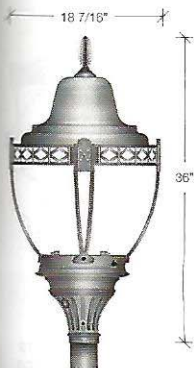


ORDERING INFORMATION

T1									
MODEL		HOUSING		CCT-COLOR TEMP		VOLTAGE		COLOR	
T1 Mediterranean		H1 Mediterranean		3K 3000° K		UNV 120-277V		BBT Basic Black Textured	
		H2 London		4K 4000° K		347 347V		BMT Black Matte Textured	
		H3 Monaco		5K 5000° K		480 480V		WHT White Textured	
LENS OPTIONS						OPTICS		CONTROL OPTIONS	
AC Acrylic, Clear						DIR2 Type II		GENI-XX Energeni ³	
AF Acrylic, Frosted						DIR3 Type III		BZT Bronze Textured	
CAGE		SOURCE				DIR4 Type IV		DBT Dark Bronze Textured	
C1 Mediterranean		24NB-55 55 Watts				DIR5 Type V		GYS Gray Smooth	
C2 London		36NB-80 80 Watts						DPS Dark Platinum Smooth	
C3 Monaco		48NB-110 110 Watts						GNT Green Textured	
C4 Park Lane								MST Metallic Silver Textured	
C5 Brighton								MTT Metallic Titanium Textured	
NC No Cage ¹								OWI Old World Iron	
						ELECTRICAL OPTIONS		RAL	
						PEC Photocell, Button			
						PCR-TL Photocell, Twist-lock ²			
						PCR-SC Photocell, Shorting Cap ²			

¹ 55 Watts max² H2 only³ When ordering Energeni, specify the routine setting code (example GENI-04). See Energeni brochure and instructions for setting table and options. Not available with sensor options.

DETAILS

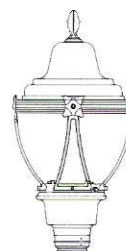


shown with standard Mediterranean configuration

 Top: T1
 Cage: C1
 Housing: H1

 Top: T1
 Cage: C1
 Housing: H1

 Top: T1
 Cage: C1
 Housing: H2

 Top: T1
 Cage: NC
 Housing: H1

 Top: T1
 Cage: C2
 Housing: H3

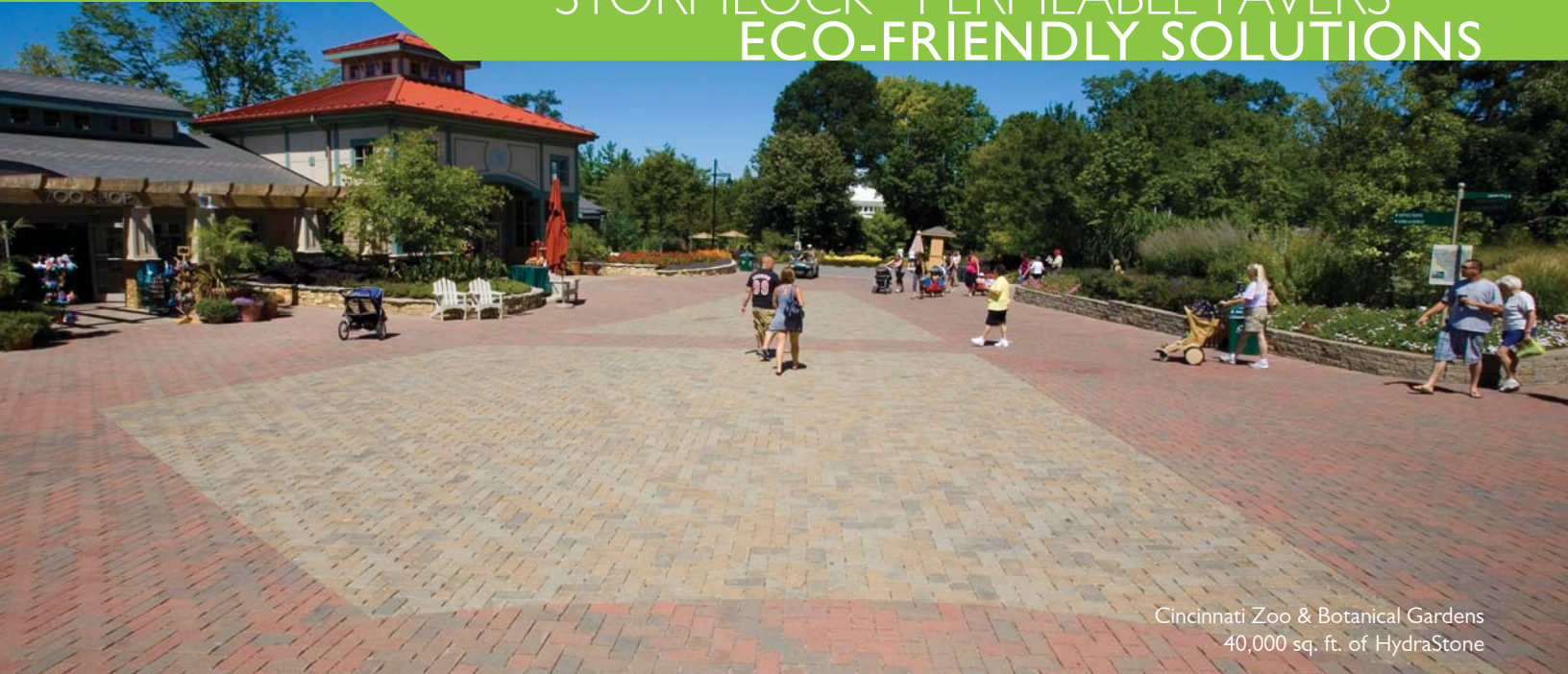
 Top: T1
 Cage: C3
 Housing: H4

 Top: T1
 Cage: C5
 Housing: H5

Below displays several examples of the over 20 custom configurations available.

Eberly Hill Site Civil Materials 01232017

STORMLOCK™ PERMEABLE PAVERS ECO-FRIENDLY SOLUTIONS



Cincinnati Zoo & Botanical Gardens
40,000 sq. ft. of HydraStone

Eco-Friendly and Environmentally Smart

Reading Rock, Inc.®, a manufacturer of quality masonry products for more than 60 years, combines cutting edge technologies with industry experience to deliver PaverLock's StormLock™ Permeable Pavers, an eco-friendly and environmentally smart product line. Our permeable pavers have been designed to reduce stormwater runoff on-site providing detention volume that can be fed into rain gardens and/or bioswales. All StormLock Permeable Pavers can be mechanically installed, providing lower labor rates, downtimes and longer life cycles of 30+ years.

A Variety of Design Options

With a vast array of colors, sizes and patterns, Reading Rock's StormLock Permeable Pavers offer a variety of design options and endless possibilities. From the classic herringbone to the contemporary geometric to rugged and rustic, we provide options to meet any design requirement.

StormLock Advantages

- ◆ Lifetime Warranty
- ◆ Durability - Exceeds 8000 PSI
- ◆ Quality Assurance
- ◆ High Surface Infiltration Rates
- ◆ Installed Anytime
- ◆ May be Mechanically Installed
- ◆ Inhibits Vegetation Growth
- ◆ Withstand Extreme Weather Conditions
- ◆ Design Flexibility
- ◆ Solar Reflectivity Index (SRI)
- ◆ ColorLock Technology
- ◆ Feeds Rain Gardens & Bio-Swales
- ◆ Americans with Disabilities Act Compliant
- ◆ Meets EPA Phase II Rule
- ◆ 30 Year Life Cycle & Ease of Maintenance

Contribute to LEED Credits

Projects utilizing StormLock Permeable Pavers contribute to LEED credits on projects. For specific details, please contact a Reading Rock associate.

- ◆ SSc6.1: Stormwater Design Quantity Control
- ◆ SSc6.2: Stormwater Design Quality Control
- ◆ SSc7.1: Heat Island Effect (Non-Roof)
- ◆ WEc1.1: Water Efficient Landscaping
- ◆ MRc4.1: Recycled Content
- ◆ MRc5.1: Regional Materials
- ◆ IDc1: 1-5: Innovation in Design
- ◆ RPI: 1-4: Regional Priority



StormLock™ PERMEABLE PAVERS ECO-FRIENDLY SOLUTIONS

HydraBric

HydraBric is the newest member to the StormLock Permeable paver family and is now available for your next project! It's 4x8 classic design and clean lines can be easily integrated with any new or existing application and is offered with and without Reading Rock's ColorLock technology. The traditional design makes it the perfect solution for any project including those where clay is desired.

HydraBric is palletized in a modified herringbone pattern and consists of 36 full pieces and 8 half pieces per layer or 77 sq. ft. per pallet. HydraBric can be mechanically installed or hand laid and has been designed to meet ADA requirements (9mm spacing).

HydraStone

HydraStone is rectilinear in shape and can be mechanically installed or hand laid with 11.25 sq. ft. per drop in a modified herringbone pattern. HydraStone meets ADA requirements and is the perfect choice for applications where minimizing drainage and runoff problems are necessary. HydraStone can be manufactured in a wide variety of colors as well with our ColorLock technology; providing unlimited design opportunities for your next project.

EcoFlo

EcoFlo has an Old World cobble stone appearance that can be mechanically installed, offering a ecologically sound and economically smart product. EcoFlo is ADA compliant and meets pedestrian slip resistance standards, offering comfortable travel for people using wheeled mobility devices such as wheelchairs.

Eco TriPaver

Eco TriPaver's unique, 12-sided design is ADA compliant and reminiscent of the three-petaled fleur-de-lis. Once installed, Eco TriPaver's multidirectional patterns will complement any design.

TurfLock

TurfLock provides both a durable surface and soil stabilization for overflow parking, scenic parks, embankments, berm slopes and water areas where waves may cause erosion. The open honeycomb design can be mechanically installed and allows ground cover to grow, while providing a strong, interlocked undersurface.

Checker Block

Checker Block is the only steel-reinforced concrete grid paving unit available in the market today. Manufactured from precast, this reinforced grid has a pedestal or shape and consists of concrete pillars held apart by low ribs. Around and between the ribs are a complex network of open cells. Each grid unit is 24" x 24" x 4" and consists of 16 pedestals.

Permeable Paver Shapes



HydraBric II
8" x 3.88"
Thickness: 3.125"



Eco TriPaver
7.44" x 7.44"
Thickness: 3.125"



HydraStone
9.65" x 4.72"
Thickness: 3.125"



TurfLock
23.625" x 15.75"
Thickness: 3.125"



EcoFlo
9" x 4.5"
Thickness: 3.125"



Checker Block
24" x 24"
Thickness: 4"

Questions?

For more information on Reading Rock's StormLock Permeable Pavers, please contact Reading Rock at 800.482.6466 for a Specification Manager in your market.

StormLock Permeable Paver Specs

Paver	Sq.Ft./pallet	Mechanical Install	Sq. Ft. Drop/Unit	Spacer Bars	Void Ratio	ADA Compliant
HydraBric II	80 sq.ft.	yes	10 sq.ft.	12.25 mm	9.57%	yes
HydraStone	85 sq.ft.	yes	10.63 sq.ft.	5 mm	6.29%	yes
EcoFlo	87 sq.ft.	yes	10.88 sq.ft.	5 mm	10%	yes
Eco TriPaver	74 sq.ft.	yes	9.25 sq.ft.	5 mm	10%	yes
TurfLock	83 sq.ft.	yes	2.59 sq.ft.	NA	30%	no
Checker Block	112 sq.ft.	yes	4 sq.ft.	NA	75%	no

Ebary Hill Site Civil Materials 01232017



Minka-Lavery Irvington Manor Three-Light Outdoor Chain Hung in Chelesa Bronze

Bellacor Number: 855046

★★★★☆ 4.0 (2)

[Ask a question](#)



Sale Price:

\$159.90*

Regular Price:

~~\$472.00~~

Compare at:

~~\$220.00*~~

You Save:

27% (\$60.10)

1 Quantity

 **ADD TO CART**

DESCRIPTION

SPECS

REVIEWS

Q&A

 [Add to Wish List](#)

 [Add to Project](#)



- Chelesa Bronze Finish
- 15.5 Inches High
- 8.5 Inches Wide
- 8.5 Inches Deep
- 3 - 60 Watt Candelabra Bulbs
- Weight: 5.73 LBS

Free Shipping

On orders over \$75 ⓘ

BACKORDERED UNTIL FEBRUARY

Usually Ships in 6 to 8 weeks ⓘ

[CANCEL & RETURN POLICIES](#)

Minka-Lavery Irvington Manor Three-Light Outdoor Wall Mount in Chelesa Bronze

Bellacor Number: 855024



[Ask a question](#)



Sale Price: **\$143.90***
Regular Price: ~~\$164.00~~
Compare at: ~~\$198.00*~~
You Save: 27% (\$54.10)

Free Shipping

On orders over \$75 ⓘ

In Stock

Ships in 1 to 2 business days ⓘ

[CANCEL & RETURN POLICIES](#)

1 Quantity



ADD TO CART

DESCRIPTION

SPECS

REVIEWS

Q&A

[Add to Wish List](#) [Add to Project](#)



- Chelesa Bronze Finish
- 16.75 Inches High
- 8.5 Inches Wide
- 9.5 Inches Deep
- 3 - 60 Watt Candelabra Bulbs
- Weight: 4.92 LBS

Minka-Lavery Irvington Manor Four-Light Outdoor Wall Mount in Chelesa Bronze

Bellacor Number: 855095



Ask a question



Sale Price:

\$199.90*

Regular Price:

~~\$244.00~~

Compare at:

~~\$275.00*~~

You Save:

27% (\$75.10)

1

Quantity



ADD TO CART

DESCRIPTION

SPECS

REVIEWS

Q&A

Add to Wish List

Add to Project



- Chelesa Bronze Finish
- 20.75 Inches High
- 10.5 Inches Wide
- 11.75 Inches Deep
- 4 - 60 Watt Candelabra Bulbs
- Weight: 7.28 LBS



RESERVE RAILING™ COLLECTION DETAILS

AZEK® Reserve Railing offers a generous architectural profile that complements large-scale spaces—decks, porches, and balconies. It features an extra wide top rail and caps that provide a look that makes a lasting statement. Enjoy the quick and easy installation AZEK Rail is known for.

- Available in 6', 8' and 10' lengths
- 12' and 16' railings available for "over the post" railing applications
- No painting or staining required
- Will not rot, peel or blister
- Hidden fastening
- Covered by a [25-year limited warranty](#)
- Building Code Reports [ESR-1481](#) and [CCRR-0114](#)

Profile Details

Ideal for large-scale projects and porches, Reserve Railing makes a grand statement. The detail in the stepped flat surface is perfect for balancing your martini glass or coffee mug as you enjoy having company on your new deck.

How to Complete Your AZEK Railing System

Choose your preferred style and color, then pair those with a matching infill. Top it off with the cap and skirt that best suit your style. Light up the evening with optional lighting accessories.



Color Choices

WHITE

Infill Options

COMPOSITE BALUSTERS

ALUMINUM BALUSTERS: SQUARE AND ROUND

CABLERAIL BY FEENEY®

GLASS CHANNEL KIT
*glass not included

Post Sleeves



Shown: 6" x 6"

SIZES: 6" X 6" | 4" X 4"

COLORS: WHITE

Caps and Skirts



Shown: 6" x 6" Island Cap & Skirt

SIZES: 6" X 6" | 4" X 4"

COLORS: WHITE

SHARE:

[PINTEREST](#)[FACEBOOK](#)[TWITTER](#)[GOOGLE+](#)[EMAIL](#)

Ready to start your project?

Find an AZEK Professional

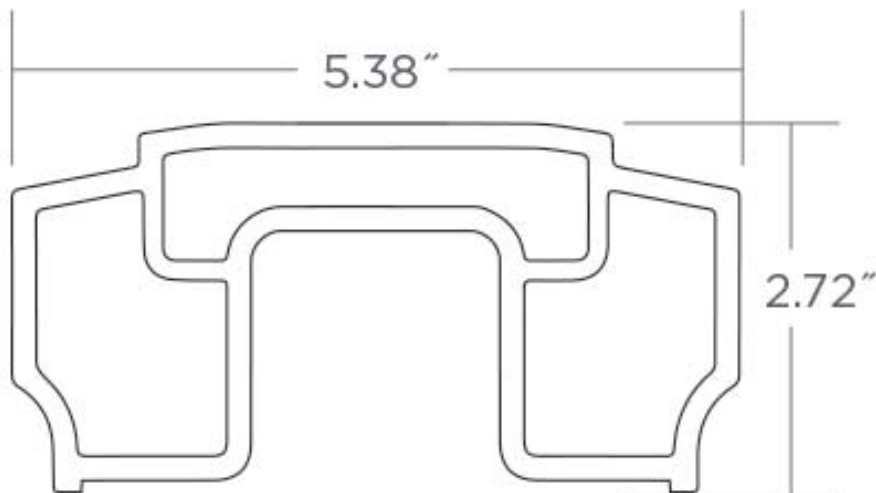
ZIP or Postal code

20 miles

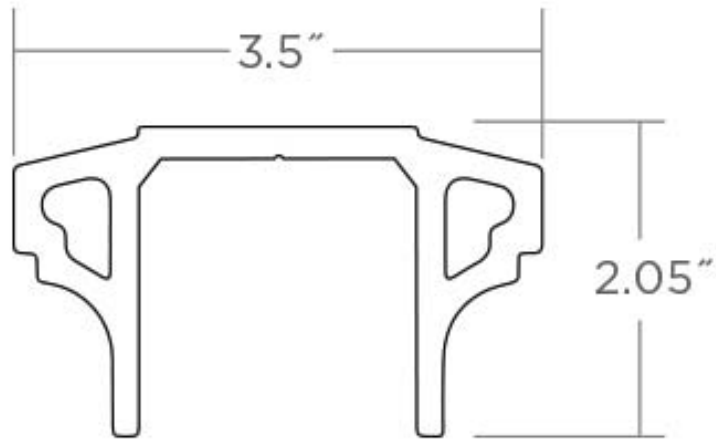
SEARCH

REQUEST A CATALOG OR FREE SAMPLE

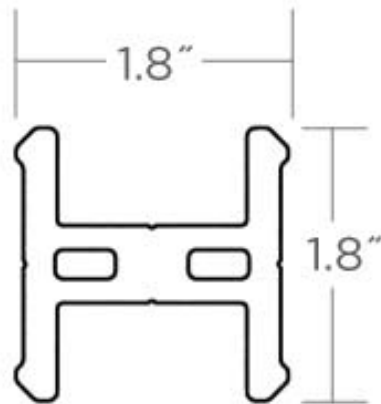
RAIL DETAIL



Reserve Top Rail

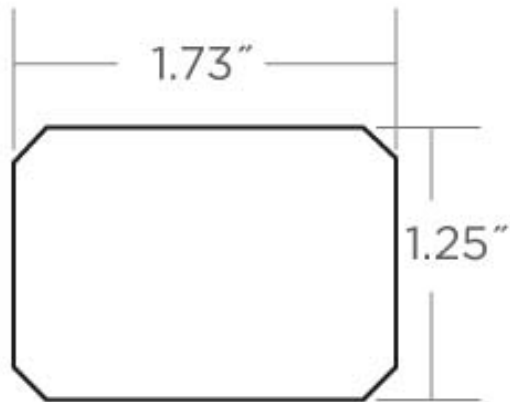


Reserve Bottom Rail



Support Rail

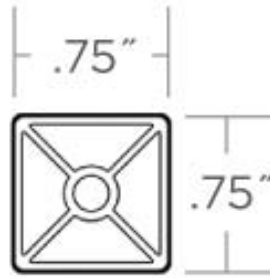
INFILL DETAIL



Rectangular Composite Baluster



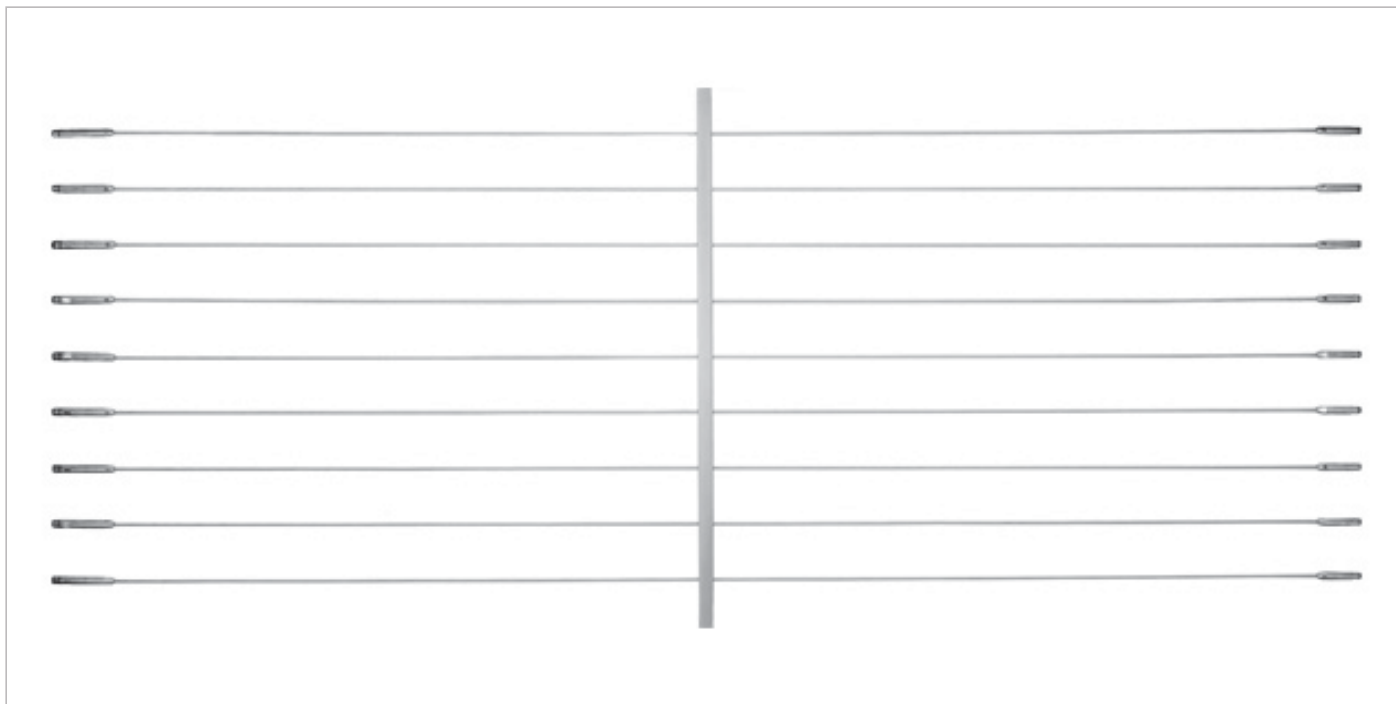
Round Aluminum Baluster



Square Aluminum Baluster

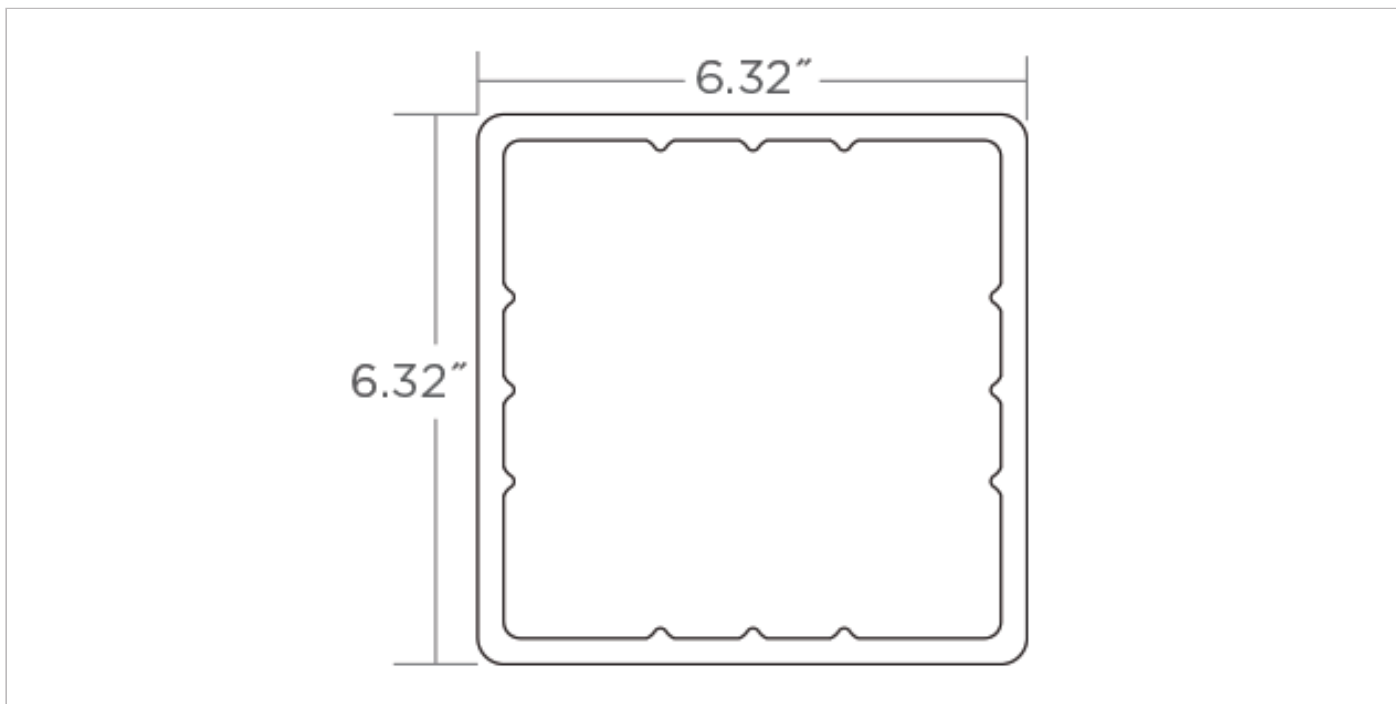


Glass Channel



Cable

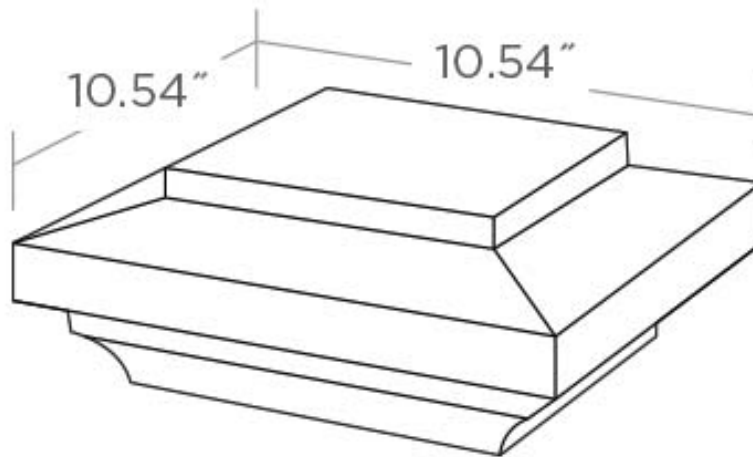
POSTS, CAPS, AND SKIRTS DETAIL



Post Sleeves

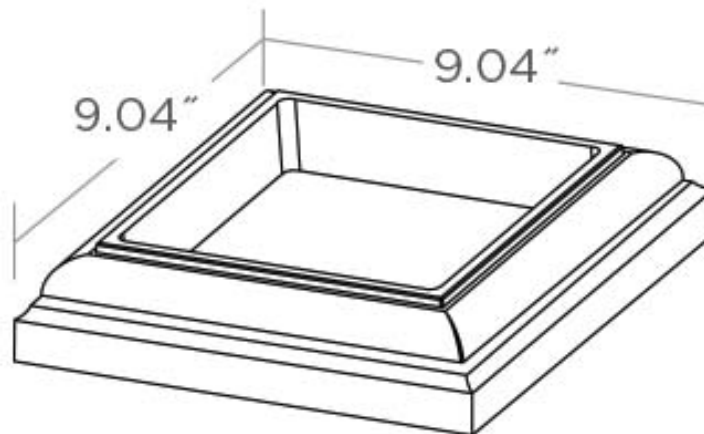
SIZES: 6" X 6" | 4" X 4"

COLORS: WHITE



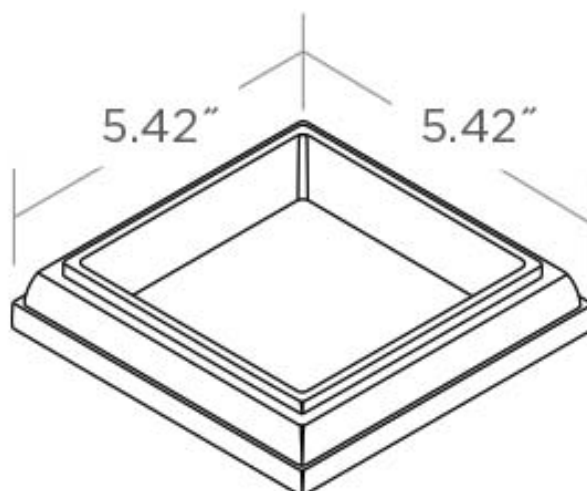
6" x 6" Island Cap

COLORS: WHITE



6" x 6" Skirt

COLORS: ALL COLORS AVAILABLE



4" x 4" Skirt

COLORS: WHITE

Options & Accessories

OPTIONS & ACCESSORIES

AZEK Rail has a complete selection of Post Caps, Post Sleeves, Post Skirts, and in-fill options to complete the look of your AZEK Rail. There is also a Secure Mount Post to make installation easy, not to mention these additional options below.

AZEK Rail ADA Handrail

AZEK Rail's Americans with Disabilities Act-compliant handrail is a fully tested and code listed system that can be installed on new AZEK Rail projects or easily integrated into existing AZEK Rail designs. The retrofit capability is a key feature for builders and remodelers mindful of "aging in place" building practices.

[LEARN MORE](#)

AZEK Rail Lighting

Outdoor lighting solutions bring light and life to your AZEK Rail. Check out all of these great rail lighting options today!

[VIEW LIGHTING OPTIONS](#)

Secure Mount Post

Helps attach AZEK railing to any surface - including concrete.



FREQUENTLY ASKED QUESTIONS

What comes in the AZEK Rail Pack?

An AZEK Rail Pack contains top rail, bottom rail, and hardware to build a rail section. Rail packs do not include posts, or balusters. Balusters are now sold separately as baluster packs.

[LEARN MORE](#)

What comes in the AZEK Baluster Pack?

An AZEK baluster pack contains composite balusters in quantities of 15 and metal balusters in quantities of 20. These packs are used with AZEK Rail packs to build the rail section that goes between posts.

[LEARN MORE](#)

Is there a touch up kit for scratches on AZEK Rail?

We currently do not offer a touch up kit. You may try visiting an automotive body shop, to get color matched paint. In our experience, enamel appliance paint is best suited for white repairs.

[LEARN MORE](#)

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1-877-275-2935

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SECTION 07310

ASPHALT SHINGLE ROOFING

GAF DESIGN LINE

PREPARED BY:



PROJECT NO.:

Note: GAF does not practice architecture or engineering. This Design Line is provided as a guide specification and is based on criteria provided to GAF. GAF has not observed the jobsite conditions, contract specifications, or other documents and shall not be construed in any manner to be the designer of record.

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

PART I GENERAL

1.01 SECTION INCLUDES

- A Asphalt roofing shingles.
- B Leak barrier and roof deck protection.
- C Metal flashing associated with shingle roofing.
- D Attic ventilation.

1.02 RELATED SECTIONS

- A Section 06100 - Rough Carpentry: Framing, wood decking, and roof sheathing.
- B Section 07620 - Flashing and Sheet Metal: Sheet metal flashing not associated with shingle roofing; gutters and downspouts.
- C Section 08630 - Unit Skylights: Skylights

1.03 REFERENCES American Society for Testing and Materials (ASTM) - Annual Book of ASTM Standards

- 1. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- 2. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- 3. ASTM B 370 - Standard Specification for Copper Sheet and Strip for Building Construction.
- 4. ASTM D 3018 - Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules.
- 5. ASTM D 3161 - Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method).
- 6. ASTM D 3462 – Standard Specification for Asphalt Shingles Made From Glass Felt and Surfaced with Mineral Granules.
- 7. ASTM D 4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
- 8. ASTM D 7158 - Standard Test Method for Wind-Resistance of Sealed Asphalt Shingles (Uplift Force/Uplift Resistance Method).
- 9. AC438-1011-R1 – New Acceptance Criteria for Alternative Asphalt Roofing Shingles
- 10. **ASTM E 903 – Standard Test Method for Solar Absorptance, Reflectance, and Transmission of Materials Using Integrating Spheres.** Underwriters Laboratories (UL) - Roofing Systems and Materials Guide (TFWZ.R21)
 - 1. UL 790 - Tests for Fire Resistance of Roof Covering Materials.
 - 2. UL 997 - Wind Resistance of Prepared Roof Covering Materials.
 - 3. UL 2218 – Impact Resistance of Prepared Roof Covering Materials.
- C Asphalt Roofing Manufacturers Association (ARMA)
- D Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) - Architectural Sheet Metal Manual.
- E National Roofing Contractors Association (NRCA)

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

- F American Society of Civil Engineers (ASCE).
 - 1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.
- G U.S. Green Building Council (USGBC)
- H Leadership in Energy and Environmental Design (LEED)
- I ENERGY STAR
- J Cool Roof Rating Council (CRRC)
- K Miami Dade County

1.04 DEFINITIONS

- A Roofing Terminology: Refer to ASTM D1079 and the glossary of the National Roofing Contractors Association (NRCA) Roofing and Waterproofing Manual for definitions of roofing terms related to this section.

1.05 LEED CERTIFICATION

- A Provide a roofing system that will achieve or aid in the qualification of points satisfying
 - 1. Sustainable Site credit 7.2 - Heat Island Effect - Roof.
 - 2. Materials & Resource credit 5 - Local and Regional Materials.

1.06 SUBMITTALS

- A Submit copies of GAF® product data sheets, detail drawings and samples for each type of roofing product.
- B L.E.E.D. submittal: Coordinate with Section 01115 - Green Building Requirements, for LEED certification submittal forms and certification templates.

1.07 QUALITY ASSURANCE

- A Manufacturer Qualifications: Provide all primary roofing products, including shingles, underlayment, leak barrier, and ventilation, by a single manufacturer.
- B Installer Qualifications: Installer must be approved for installation of all roofing products to be installed under this section.

1.08 REGULATORY REQUIREMENTS

- A Provide a roofing system achieving an Underwriters Laboratories (UL) Class A fire classification.
- B . Install all roofing products in accordance with all federal, state and local building codes.
- D All work shall be performed in a manner consistent with current OSHA guidelines.

1.09 PREINSTALLATION MEETING

- A General: For all projects in excess of 250 squares of roofing, a pre-installation meeting is strongly recommended.
- B Timing: The meeting shall take place at the start of the roofing installation, no more than 2 weeks into the roofing project.
- C Attendees: Meeting to be called for by manufacturer's certified contractor. Meeting's mandatory attendees shall include the certified contractor and the manufacturer's representative. Non-mandatory attendees shall include the owner's representative, architect or engineer's representative, and the general contractor's representative.
- D Topics: Certified contractor and manufacturer's representative shall review all pertinent requirements for the project, including but not limited to, scheduling, weather considerations, project duration, and requirements for the specified warranty.

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

1.10 DELIVERY, STORAGE, AND HANDLING

- A Store all products in manufacturer's unopened, labeled packaging until they are ready for installation.
- B Store products in a covered, ventilated area, at temperature not more than 110 degrees F (43 degrees C); do not store near steam pipes, radiators, or in direct sunlight.
- C Store bundles on a flat, properly drained surface. Maximum stacking height shall not exceed GAF®'s recommendations. Store all rolls on end.
- D Store and dispose of solvent-based materials in accordance with all federal, state and local regulations.

1.11 WEATHER CONDITIONS

- A Proceed with work only when existing and forecasted weather conditions will permit work to be performed in accordance with GAF®'s recommendations

1.12 WARRANTY Provide to the owner a **GAF® Shingle & Accessory Ltd. Warranty for:**

- 1. GAF® Lifetime Shingles covering
 - a Single family detached homes owned by individuals the first
 - b Manufacturing defects: 100% coverage for materials for:
 - 10 years non-prorated, then 20% thereafter for all GAF Lifetime Shingles.
 - 5 years non-prorated, then 20% thereafter for GAF Royal Sovereign and Marquis Weathermax Shingles.
 - c Any other type of owner or building – 40 years with the first 5 years non - prorated.
 - d With the use of three or more GAF Accessory Products (GAF Ridge Cap Shingles, GAF Starter Strip Shingle, GAF Leak Barrier, GAF Roof Deck Protection, GAF Cobra
- 2. Against algae discoloration for 10 years
- B Provide to the owner a **GAF® WeatherStopper® Golden Pledge® Ltd Warranty** covering:
 - 1. Roofs installed by a Certified GAF® Master Elite™ Contractor only.
 - 2. Manufacturing defects: 100% coverage for materials and labor for:
 - a Single family detached homes owned by individuals the first
 - 50 years non-prorated, then 20% thereafter for all GAF lifetime shingles.
 - 20 years non-prorated, then 20% thereafter for GAF Marquis Weathermax and GAF Royal Sovereign Shingles.
 - b Any other type of owner or building – 40 years with the first 20 years non-prorated. (excludes Marquis WeatherMax and Royal Sovereign)
 - 3. Workmanship errors: 100% coverage for workmanship errors for:
 - a Single family detached homes owned by individuals - the first 25 years for after installation. (20 years for Marquis WeatherMax and Royal Sovereign)
 - b Any other type of owner or building - 20 years.
 - 4. Roof system NOT installed over an existing roof, all existing roof materials must be removed to the deck.
 - 5. Warranted against algae discoloration for 10 years

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

6. Full roof installations (Roofs installed on portions of buildings do not qualify) using the following GAF® products.
 - a You must use GAF® Roof Deck Protection.
 - b You must use eligible GAF® Leak Barrier in valleys and around dormers, sidewalls, firewalls, chimneys, plumbing vents, and skylights. In the North, leak barriers must be used at all eaves at least 24 inch inside warm wall.
 - c You must use GAF® pre-cut starter strip products (only those with factory applied adhesive) at the eaves. Note: To obtain bonus wind coverage, you must use GAF® pre cut starter strip products (with factory applied adhesive) at the eaves and rakes and you must install each shingle using 6 nails. For Miami Dade County Florida, no adhesive on rakes. You must cement the starter strip in and nail along the rake.
 - d You must use eligible COBRA® ventilation with adequate intake ventilation. Master Flow® exhaust ventilation products can be substituted only if COBRA® ridge ventilation cannot be installed due to a structure's architecture. In any event, adequate ventilation should meet the following requirements:
 - i. Minimum net free ventilation area of 1 sq ft per 150 sq ft of ceiling area is required. When intake vents are located at the eaves and exhaust vents are located near the roof's peak (in a properly balanced system) for maximum air flow, ventilation may be reduced to 1 sq ft per 300 sq ft. If these standards are not met, GAF® cannot be responsible for damage caused by inadequate ventilation.
 - e You must use GAF® Ridge Cap Shingles or shingles that correspond to the shingle product you are installing.
 - f You must use eligible GAF® Roofing Shingles.
 - g New metal flashings must be installed. Metal drip edge must be used at eaves and is recommended at rake edges.
 7. In addition to the requirements listed above, you installer must register and pay for this warranty. On projects that total more than 250 squares, the permanent Golden Pledge® Ltd Warranty will be issued only if the project passes GAF®'s final inspection. GAF® reserves the right to withhold the warranty if the roof has not been installed according to GAF®'s written application instructions. GAF® also strongly recommends that your Master Elite® Contractor schedule a start-up and at least one interim inspection on projects of 250 squares or more by contacting GAF® at least three weeks prior to the start of roof work.
- C Provide to the owner a **GAF® Weather Stopper® System Plus Ltd Warranty** covering:
1. Roofs installed by a Authorized Home Builder, Certified Contractor or Certified GAF® Master Elite™ Contractor only.
 2. Manufacturing defects: 100% coverage for materials and labor for:
 - a Single family detached homes owned by individuals the first
 - 50 years non-prorated, then 20% thereafter for all GAF lifetime shingles.
 - 20 years non-prorated, then 20% thereafter for GAF Marquis Weathermax and GAF Royal Sovereign Shingles.
 - b Any other type of owner or building – 40 years with the first 20 years non-prorated. (excludes Marquis WeatherMax and Royal Sovereign)
 3. Warranted against algae discoloration for 10 years

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

- D Provide to the owner a **GAF® All American Pledge™ Guarantee**
1. Provide to the owner a GAF® WeatherStopper® Golden Pledge® Ltd Warranty for the Steep Slope System covering:
 - a Roofs installed by a Certified GAF® Master Elite™ Contractor only.
 - b Manufacturing defects: 100% coverage for materials and labor for:
 - i. Single family detached homes owned by individuals the first
 - 50 years non-prorated, then 20% thereafter for all GAF lifetime shingles.
 - 20 years non-prorated, then 20% thereafter for GAF Marquis Weathermax and GAF Royal Sovereign Shingles.
 - ii. Any other type of owner or building – 40 years with the first 20 years non-prorated. (excludes Marquis WeatherMax and Royal Sovereign)
 - c Workmanship errors: 100% coverage for workmanship errors for:
 - i. Single family detached homes owned by individuals - the first 25 years for after installation. (20 years for Marquis WeatherMax and Royal Sovereign)
 - ii. Any other type of owner or building - 20 years.
 2. Roof system NOT installed over an existing roof, all existing roof materials must be removed to the deck.
 3. Warranted against algae discoloration for 10 years
 4. Provide Manufacturers standard WeatherStopper® Diamond Pledge™ Guarantee for the Low Slope system covering:
 - a Single source **Edge-to-Edge** coverage* and no monetary limitation, where the manufacturer agrees to repair or replace components in the roofing system and pre-approved metal edge details, which cause a leak due to a failure in materials or workmanship.
 - i Duration: (20) Twenty years from the date of completion
- E Provide to the owner a **GAF Cornell® ThermaCal Nail Base Roof Insulation Ltd. Warranty.**
- a TBD.
 - i. Duration: (15) Fifteen years from the date of completion

PART II PRODUCTS

2.01 MANUFACTURER

- A Acceptable Manufacturer: GAF®, 1 Campus Drive, Parsippany, NJ 07054. Tel: 1-973-628-3000.
- B Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.02 VENTILATED ROOF INSULATION PANELS

- A Preassembled panel consisting of a oriented strand board top surface a wood spacer block separating a layer of Isocyanurate insulation on the bottom, **ThermaCal® 1 Ventilating Roof Insulation Panel** by GAF-Cornell.
1. 7/16", 5/8", 3/4" OSB or plywood *****Select A Thickness*****
 2. 1", 1-1/2", 2" wood spacers blocks *****Select A Thickness*****

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

- B Preassembled panel with two layers of oriented strand board separated by spacer blocks and isocyanurate insulation on the bottom, **ThermaCal® 2 Ventilating Roof Insulation Panel** by GAF-Cornell.

1. 7/16", 5/8", 3/4" OSB or plywood ***Select A Thickness***
2. 1", 1-1/2", 2" wood spacers blocks ***Select A Thickness***

2.03 SHINGLES

- A Granule surfaced, self-sealing asphalt shingle with a strong fiberglass reinforced Micro Weave® core and StainGuard® protection, which prevents pronounced discoloration from blue-green algae through formulation/unique blends of granules. Architectural laminate styling provides a wood shake appearance with a 5 5/8 inch exposure. Features GAF®'s patented High Definition® color blends and enhanced shadow effect. . UL 790 Class A rated with UL 997 Wind Resistance Label; ASTM D 7158, Class H; ASTM D 3161, Type 1; ASTM D 3018, Type 1; ASTM D 3462; CSA-A123.5; AC438; Dade County Approved, Florida Building Code Approved, Texas Dept of Insurance Approved, ICC Report Approval. **Timberline Ultra HD®** Lifetime High Definition Shingles, by GAF®.

1. Color: As selected from manufacturers' full range.
2. Color: _____

2.04 HIP AND RIDGE SHINGLES

- A High profile self sealing hip and ridge cap shingle matching the color of selected roof shingle. Each bundle covers approx. 20 lineal feet (6.10m). **Timbertex®** Premium Ridge Cap Shingles, by GAF®.
- B Distinctive self sealing hip and ridge cap shingle complementing the color of selected roof shingle. Each bundle covers approx. 31 lineal feet (9.45m) with an 8 inch (203mm) exposure. **Ridglass™ 10"** Ridge Cap Shingles by GAF®.
- C Distinctive self sealing hip and ridge cap shingle complementing the color of selected roof shingle. Each bundle covers approx. 31 lineal feet (9.45m) with an 8 inch (203mm) exposure **Ridglass™ 8"** Ridge Cap Shingles by GAF®.
- D Distinctive self sealing hip and ridge cap shingle complementing the color of selected roof shingle. Each bundle covers approx. 25 lineal feet (7.62mm) with a 6 2/3 inch (169mm) exposure. **Seal-A-Ridge®** Ridge Cap Shingles by GAF®.
- E Distinctive hip and ridge cap shingle complementing the color of selected roof shingle. Each bundle covers approx. 33.3 lineal feet (10.15m) with a 5 5/8 inch (147mm) exposure. **Z® Ridge** Shingles by GAF®.
- F UL 2218, Class 4, self sealing hip and ridge cap shingle complementing the color of selected roof shingle. Each bundle covers approx. 25 lineal feet (7.62mm) with a 6 2/3 inch (169mm) exposure. **Seal-A-Ridge® ArmorShield™ II** Ridge Cap Shingles by GAF®.

2.05 STARTER STRIP

- A Self sealing starter shingle designed for premium roof shingles. Each bundle covers approx. 100 lineal feet (30.48m) for English and metric shingles or 50 lineal feet (15.24m) for oversized shingles. **WeatherBlocker™** Eave/Rake Starter Strip by GAF®.
- B Self sealing starter shingle designed for all roof shingles. Each bundle covers approx. 120 lineal feet (36.58m). **ProStart™** Starter Strip by GAF®.
- C Pre-cut, color coordinated starter strip shingle designed as a second starter course for shingles with large cut-outs. Each bundle covers approx.. 60 lineal feet (18.29 m) **StarterMatch™** Starter Strip by GAF®.

2.06 LEAK BARRIER

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

- A Self-adhering, self-sealing, bituminous leak barrier surfaced with fine, skid-resistant granules. Approved by UL, Dade County, ICC, State of Florida and Texas Department of Insurance. Each roll contains approx. 150 sq ft (13.9 sq.m.), 36" X 50' (0.9m x 20.3m) or 200 sq ft (18.6 sq.m.), 36" X 66.7' (0.9m x 20.3m). **WeatherWatch®** Leak Barrier, by GAF®.
- B Self-adhering, self-sealing, bituminous leak barrier surfaced with a smooth polyethylene film. Approved by UL, Dade County, ICC, State of Florida and Texas Department of Insurance. Each Roll contains approx. 200 sq ft. (18.6 sq.m.), 36" X 66.7' (0.9m x 20.3m), and 60 mils thick. **StormGuard®** Leak Barrier, by GAF®.
- C Self-adhering, self-sealing, SBS modified waterproof leak barrier. Approved by UL, FM, Dade County, and State of Florida. Each roll contains approx. 200 sq ft (18.6 sq.m.), 39.4in. X 67.8ft. (1 m x 20.7m), **UnderRoof™2** Waterproof Protection by GAF®.

2.07 SHINGLE UNDERLAYMENT

- A Premium, water repellant, breather type non-asphaltic underlayment. UV stabilized polypropylene construction. Meets or exceeds ASTM D226 and D4869. Approved by Dade County, Florida Building Code, and ICC. Each roll contains approximately 10 squares (1003 sq. ft.) of material and is 54 in. x 223 ft. **Deck-Armor™** Premium Breathable Roof Deck Protection, by GAF®.
- B Synthetic, non-asphaltic, non-woven, anti-skid back coated, polypropylene constructed non breathable underlayment. Meets or exceeds ASTM D226 and D4869 approved by UL, Florida Building Code, ICC and CSA A220.1. Each roll contains approximately 10 squares (1000 gross sq. ft.) of material and is 48 in. x 250 ft. (14.6 m x 76.2 m), **Tiger-Paw™** Roof Deck Protection by GAF®.
- C Water repellent, breather type cellulose/glass fiber composite roofing underlayment. Meets or exceed ASTM D226 and D4869 and approved by UL and the Florida Building Code. Each roll contains approximately 4 squares (432 sq. ft.) of material and is 36" x 144" **Shingle-Mate®** Roof Deck Protection, by GAF®.
- D Premium, all-purpose fiberglass reinforced SBS modified underlayment. Meets or exceeds ASTM D226. Approved by UL and ICC. Each roll contains 2 squares (20.06 sqm.) of material and is 39.37 in. x 65.8 ft. (1m x 20m), **Roof Pro™** SBS Modified All-Purpose Underlayment by GAF®.
- E Non-woven fiberglass mat underlayment coated on both sides suing a highly filled polymer. Provides a fire barrier and water resistant. Approved by Dade Country, Florida Building Code, and ICC approval. Each roll contains 350 gross sq ft (32.52 m²) of material and is 42 in. x 100 ft. (1.07 m x 30.48 m) **VersaShield®** Fire-Resistant Roof Deck Protection by GAF®.
- F #15 Roofing Underlayment – By Others: Water repellent breather type cellulose fiber building paper. Meets or exceeds the requirements of ASTM D-4869 Type I.
- G #30 Roofing Underlayment - By Others: Water repellent breather type cellulose fiber building paper. Meets or exceeds the requirements of ASTM D-4869 Type II.

2.08 ROOFING CEMENT

- A Asphalt Plastic Roofing Cement meeting the requirements of ASTM D 4586, Type I or II.

2.09 ROOF ACCESSORIES

- A Exterior acrylic rust resistant aerosol roof accessory paint. Each 6 oz can is available in boxes of 6 and in a wide variety of colors to compliment the roof. **Shingle-Match™** Roof Accessory Paint by GAF®.
- B [UV stable solid molded PVC compression collar](#), [Kynar PVDF coated 24 guage galvanized flange](#), [Ultimate Pipe Flashing](#) by Lifetime Tool.

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

2.10 ATTIC VENTILATION

A Ridge Vents

1. Flexible rigid plastic ridge ventilator designed to allow the passage of hot air from attics, while resisting snow infiltration. For use in conjunction with eave/soffit ventilation products. Provides 12.5 sq inches Net Free Ventilation Area per lineal foot (26460 sq.mm/m). Each package contains 20 lineal feet (6.10m) of vent. **Cobra® Ridge Runner™** Ridge Vent by GAF®.
2. Flexible ridge ventilator designed to allow the passage of hot air from attics. For use in conjunction with eave/ soffit intake ventilation products. Provides 16.9 inches (1430 mm/m) Net Free Ventilation Area (Hand Nail) and 14.1 inches (1193 mm/m) Net Free Ventilation Area (Nail Gun) per lineal foot. **Cobra® Exhaust Vent**, by GAF®.
3. Rigid plastic ridge ventilator designed to allow the passage of hot air out of attics. For use in conjunction with eave/ soffit intake ventilation products. Provides 18.0 sq inches (38102 sq.mm/m) in Net Free Ventilation Area per lineal foot. Each package contains 40 lineal feet (12.19m) of vent. **Cobra® Rigid Vent 3™** ridge vent (includes 3" (76mm) galvanized ring shank nails), by GAF®
4. Rigid plastic ridge ventilator designed to allow the passage of hot air from attics while prohibiting snow infiltration. For use in conjunction with eave/ soffit intake ventilation products. Provides 18.0 sq inches (19051 sq.mm/m) Net Free Ventilation Area per lineal foot. Each package contains 40 lineal feet (12.19m) of vent. **Cobra® Snow Country™** or **Cobra® Snow Country Advanced™** Ridge Vent (includes 3" (76mm) galvanized ring shank nails), by GAF®.

B Fascia and Soffit/Under Eave Vents

1. Flexible rigid plastic ridge ventilator designed to allow the passage of hot air out of attics at the roof top along the eaves. For use in conjunction with ridge ventilation products. Provides 9.0 sq inches (11613 sq.mm/m) in NFVA per lineal foot. Each package contains 40 lineal feet (12.19m) of vent, **Cobra® IntakePro™** Rooftop Intake Vent (includes 1-3/4" (44.5 mm) coil nails), by GAF®
2. Flexible ridge ventilator designed to allow the passage of air into thru the fascia. 1"x3" (25 mm x 76mm) provides a Net Free Ventilation Area of 11 square inches per foot and 1½" x3" (38 mm x 76 mm) provides a Net Free Ventilation Area of 16 square inches per foot. **Cobra® Fascia Vent**, by GAF®.
3. Surface mounted closeable soffit vent with intrgal screen to help prevent wildfire embers from being drawn into the attic. 16.5" x 9" (419 mm x 229 mm) paintable finish providing 56 sq. in. (36,131 sq mm) of NFA, **MasterFlow® EmberShield® Closeable Soffit Vent** by GAF
4. Surface mounted, screened aluminum, corrosion resistant soffit vent. **MasterFlow™ EAC** Soffit Vent by GAF®.
5. Surface mounted, high impact resin, oval snap-in designed soffit vent. **MasterFlow™ EAP** Soffit Vent by GAF®.
6. Continuous aluminum 8ft section soffit vent. **MasterFlow™ LSV8** Series Soffit Vent by GAF®.

C Hip Vents

1. Flexible low profile rigid plastic ridge ventilator designed to allow the passage of hot air from attics, while resisting rain and snow infiltration. For use in conjunction with eave/soffit ventilation products. Provides 9 sq inches Net Free Ventilation Area per

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

lineal foot (19,046 sq.m/m). Each package contains 40 lineal feet (12.19m) of vent. **Cobra® Hip Vent** Exhaust Vent by GAF®.

D Solar Powered Vents

1. High powered solar powered roof exhaust vent designed to remove damaging heat and moisture from attics. Each vent provides 750 CFM and is solar powered to help reduce related utility costs. **Green Machine™ High Powered Solar Powered Roof Exhaust** Vent, by GAF®.
2. Solar powered roof exhaust vent designed to remove damaging heat and moisture from attics. Each vent provides 500 CFM and is solar powered to help reduce related utility costs. **Green Machine™ Solar Powered Roof Exhaust** Vent, by GAF®.
3. Solar powered intake booster vent designed for houses with insufficient soffit ventilation. Each vent provides up to 500 CFM airflow and is solar powered to help reduce related utility costs. **Green Machine™ Solar Powered Intake Booster™** Vent, by GAF®.
4. Solar powered gable mounted exhaust ventilators designed to remove damaging heat and moisture from attics. Each vent provides 500 CFM and is solar powered to help reduce related utility costs. **Green Machine™ Solar Powered Gable** Vent, by GAF®.

E Dual Powered Vents

1. Dual powered roof exhaust vent designed to remove damaging heat and moisture from attics. Each vent provides 500 CFM and is solar and electric powered to provide continuous operation and help reduce related utility costs. **Green Machine™ Dual Powered Roof Exhaust** Vent, by GAF®.
2. Dual powered gable mounted exhaust ventilators designed to remove damaging heat and moisture from attics. Each vent provides 500 CFM and is solar and electric powered to provide continuous operation and help reduce related utility costs. **Green Machine™ Dual Powered Gable** Vent, by GAF®.

F Powered Vents

1. Powered, rooftop mounted exhaust ventilators designed to evacuate hot air from attics. Each vent permits the passage of 1000 to 1600 c.f.m. Thermostat and/or humidistat controlled. **MasterFlow™ PR or ERV Series** power roof ventilators, by GAF®.
2. Powered, gable mounted exhaust ventilators designed to evacuate hot air from attics. Each vent permits the passage of 1280 to 1600 c.f.m. Thermostat and/or humidistat controlled. **MasterFlow™ PG or EGV Series** power roof ventilators, by GAF®.

G Roof Louvers

1. Rooftop mounted, square-top designed, high-impact resin exhaust ventilator designed to evacuate hot air from attics. Each vent provides 60 sq in NFVA. **MasterFlow™ RT-65** Passive Roof Louver, by GAF®.
2. Rooftop mounted, slant-back designed, metal exhaust ventilator designed to evacuate hot air from attics. Each vent provides 60 sq in NFVA. **MasterFlow™ SSB 960A** Passive Roof Louver, by GAF®.
3. Rooftop mounted, slant-back designed, high-impact resin exhaust ventilator designed to evacuate hot air from attics. Each vent provides 65 sq in NFVA. **MasterFlow™ IR65** Passive Roof Louver, by GAF®.
4. Rooftop mounted, low-profile square-top designed, high-impact resin exhaust ventilator designed to evacuate hot air from attics. Each vent provides 37 sq in NFVA. **MasterFlow™ IR-61** Passive Roof Louver, by GAF®.

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

5. Rooftop mounted, square-top, slant-back, metal exhaust ventilator designed to evacuate hot air from attics. Each vent provides 50 sq in NFVA. **MasterFlow™ NSB50A** Passive Roof Louver, by GAF®.
6. Rooftop mounted, square-top metal utility ventilator designed to evacuate hot air from attics, bathrooms, and kitchen ducts. Each vent provides 50 sq in NFVA. **MasterFlow™ RV50A** Metal Utility Vent, by GAF®.

H Gable Louvers

1. Surfaced mounted, flush or recessed one piece integral construction in thermoformed plastic or aluminum. **Masterflow™ DA** Series or **SL** Series Gable Louver by GAF®.
2. Circular surfaced mounted, one piece integral construction high-impact white plastic mini vent. **Masterflow™ RLSC** Series Circular Louver by GAF®.

I Roof Turbines

1. Rooftop mounted, stainless dual bearing, high performance, aluminum rotary turbine exhaust vents. **MasterFlow™ AIC12 & AIC14** Rotary Turbine Vents by GAF®.
2. Rooftop mounted, stainless dual bearing, high performance, galvanized rotary turbine exhaust vents. **MasterFlow™ GC12E** Rotary Turbine Vent by GAF®.

J Whole House Fans **attic spaces greater than 1000sq.ft only**

1. Interior ceiling mounted belt drive deluxe house fan. Super quiet 1/3 hp permanent split capacitor motor, wall switch operated. **MasterFlow™ 30BWHFS** Belt Drive Deluxe Whole House Fan by GAF®.
2. Interior ceiling mounted direct drive standard house fan. Super quiet 1/4 hp permanent split capacitor motor, chain switch operated. **MasterFlow™ WHFS24M** Direct Drive Standard Whole House Fan by GAF®.
3. Interior ceiling mounted tandem whole house fan. 2 speed remote operated. **MasterFlow™ WHFTAN1** Tandem Whole House Fan by GAF®.

2.11 VENTILATION ACCESSORIES

A Chimney Cap

1. Stainless steel vented chimney cap. **MasterFlow™ CC1313SS** Safety Cap by GAF®.
2. Epoxy powder finished vented chimney cap. **MasterFlow™ CC99, CC913 and CC1313** Safety Cap by GAF®.
3. Epoxy powder finished adjustable bracket mount vented chimney cap. **MasterFlow™ CC99, CC913 and CC1313** Safety Cap by GAF®.

B Foundation Vent

1. High Density Polyethylene constructed electric foundation vent provides up to 330 CFM/airflow. Independent laboratory approved. **Masterflow™ PFV1** Foundation Vent by GAF®.
2. High Density Polyethylene constructed automatic foundation vent. **Masterflow™ FVRABL** Foundation Vent by GAF®.
3. Die Cast aluminum positive open/closed damper foundation vent. **Masterflow™ 500** Foundation Vent by GAF®.
4. Galvanized steel or aluminum high level ventilation foundation vent. **Masterflow™ BVSII** Foundation Vent by GAF®.

2.12 NAILS

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

- A Standard round wire, zinc-coated steel or aluminum; 10 to 12 gauge, smooth, barbed or deformed shank, with heads 3/8 inch (9mm) to 7/16 inch (11mm) in diameter. Length must be sufficient to penetrate into solid wood at least 3/4 inch (19mm) or through plywood or oriented strand board by at least 1/8 inch (3.18mm).

2.13 METAL FLASHING 24 gauge hot-dip galvanized steel sheet, complying with ASTM A 653/A 653M, G90/Z275.

- B 16-oz/sq ft (0.56mm) copper sheet, complying with ASTM B 370.

- C 0.032-inch (0.8mm) aluminum sheet, complying with ASTM B 209.

PART II EXECUTION

2.01 EXAMINATION

- A Do not begin installation until the roof deck has been properly prepared.
- B If roof deck preparation is the responsibility of another installer, notify the architect or building owner of unsatisfactory preparation before proceeding.

2.02 PREPARATION Remove all existing roofing down to the roof deck.

- B Verify that the deck is dry, sound, clean and smooth. It shall be free of any depressions, waves, and projections.
- C Cover with sheet metal, all holes over 1 inch (25mm) in diameter, cracks over 1/2 inch (12mm) in width, loose knots and excessively resinous areas.
- D Replace damaged deck with new materials.
- E Clean deck surfaces thoroughly prior to installation of eaves protection membrane and underlayment.

2.03 PREPARATION OF SUBSTRATE Clean deck surfaces thoroughly prior to installation of eaves protection membrane and underlayment.

- B At areas that receive eaves protection membrane, fill knotholes and cracks with latex filler.
- C Install crickets on the upslope side of all chimneys in the north, any chimney wider than 24" (610mm), and on all roofs steeper than 6/12.

2.04 PREPARATION Verify that the deck is structurally sound and free of deteriorated decking. All deteriorated decking shall be removed and replaced with new materials.

- B Verify that the existing shingles are dry, sound, clean and smooth. All curled, buckled or loose tabs shall be nailed down or removed.
- C Clean shingle surfaces thoroughly prior to installation of eaves protection membrane and underlayment.

2.05 SUBSTRATE INSTALLATION

- A The structural roof deck shown in the plans shall be smooth and level and free of water or debris before the nail base insulation is installed. Apply vapor retarder if required.

NOTE: GAF recommends that the designer carefully considers the need for a vapor/air retarder.

- B Installation shall follow the GAF written installation instructions.
- C Fasten with ThermaCal® Fasteners to the supporting roof deck shown in the plans.
- D Protect nail base insulation work from exposure to moisture damage and deterioration, primarily by prompt installation of the roofing, sheet metal and waterproofing work.

2.06 INSTALLATION OF UNDERLAYMENTS General:

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

1. Install using methods recommended by GAF®, in accordance with local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.

B Eaves:

1. Install eaves edge metal flashing tight with fascia boards; lap joints 2 inches (51mm) and seal with plastic cement or high quality urethane sealant; nail at the top of the flange.
2. In the north, and on all roofs between 2/12 and 4/12 (low slopes) install GAF® leak barrier up the slope from eaves edge a full 36 inches (914mm) or to at least 24 inches (610 mm) beyond the interior "warm wall". Lap ends 6 inches (152mm) and bond.

C Valleys:

1. Install eaves protection membrane at least 36 (914mm) inches wide and centered on the valley. Lap ends 6 inches (152mm) and seal.
2. Where valleys are indicated to be "open valleys", install metal flashing over GAF® leak barrier before GAF® roof deck protection is installed; DO NOT nail through the flashing. Secure the flashing by nailing at 18 inches (457 mm) on center just beyond edge of flashing so that nail heads hold down the edge.

D Hips and Ridges:

1. Install GAF® leak barrier along entire lengths. If ridge vents are to be installed, position the GAF® leak barrier so that the ridge slots will not be covered.

E Roof Deck Protection:

1. Install one layer of GAF® roof deck protection over the entire area not protected by GAF® leak barrier at the eaves or valley. Install sheets horizontally so water sheds and nail in place.
2. On roofs sloped at more than 4:12, lap horizontal edges at least 2 inches (51mm) and at least 2 inches (51mm) over eaves protection membrane.
3. On roofs sloped between 2:12 and 4:12, lap horizontal edges at least 19 inches (482 mm) and at least 19 inches (482mm) over eaves protection membrane.
4. Lap ends at least 4 inches (102 mm). Stagger end laps of each layer at least 36 inches (914 mm).
5. Lap GAF® roof deck protection over GAF® leak barrier in valley at least 6 inches (152mm).

F Deck-Armor™ Application

1. Deck-Armor shall be installed over a clean, dry deck.
2. Install Weather Watch® or StormGuard® Leak Barrier at eaves, valleys, rakes, skylights, dormers and other vulnerable leak areas.
3. Lay Deck-Armor™ over deck and overlap 3" (76mm) at side laps and 6" (152mm) at end laps.
4. For exposure to rain or snow, overlap 12" (305mm) at end laps.
5. For side and end laps: fasten Deck-Armor 12" (305mm) o.c. (6" (152mm)o.c. for high wind areas).
6. For middle of the roll: fasten Deck-Armor 24" (610mm) o.c. (12" (305mm) o.c. for high wind areas).

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

7. For exposure to rail or snow, completely cover all side laps, end laps and fasteners with tape.
8. For long term exposure see complete Deck-Armor installation instructions for side lap detail.
9. If roof may be exposed to high winds, apply tape over all fasteners at the center of the roll to prevent rain or snow from entering at the fasteners.
10. For slopes less than 2:12, a double application of Deck-Armor™ is required. See complete Deck-Armor installation instructions for more information.

G Penetrations:

1. Vent pipes: Install a 24 inch (610 mm) square piece of eaves protection membrane lapping over roof deck underlayment; seal tightly to pipe.
2. Vertical walls: Install eaves protection membrane extending at least 6 inches (152mm) up the wall and 12 inches (305mm) on to the roof surface. Lap the membrane over the roof deck underlayment.
3. Skylights and roof hatches: Install eaves protection membrane from under the built-in counterflashing and 12 inches (305mm) on to the roof surface lapping over roof deck underlayment.
4. Chimneys: Install eaves protection membrane around entire chimney extending at least 6 inches (152mm) up the wall and 12 inches (305mm) on to the roof surface. Lap the membrane over the roof deck underlayment.
5. Rake Edges: Install metal edge flashing over eaves protection membrane and roof deck underlayment; set tight to rake boards; lap joints at least 2 inches (51mm) and seal with plastic cement; secure with nails.

2.07 INSTALLATION OF STARTER SHINGLES

A General:

1. Install in accordance with GAF®'s instructions and local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.
2. Refer to application instructions for the selected starter strip shingles.

B Placement and Nailing:

1. For maximum wind resistance along rakes & eaves, install any GAF® starter strip containing sealant or cement shingles to underlayment and each other in a 4" (102mm) width of asphalt plastic roof cement.
2. Place starter strip shingles 1/4" – 3/4" (6 – 19mm) over eave and rake edges to provide drip edge.
3. Nail approximately 1-1/2" – 3" (38 – 76mm) above the butt edge of the shingle.
4. Rake starter course should overlap eave edge starter strip at least 3" (76mm).

2.08 INSTALLATION OF SHINGLES

A General:

1. Install in accordance with GAF®'s instructions and local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

2. Minimize breakage of shingles by avoiding dropping bundles on edge, by separating shingles carefully (not by "breaking" over ridge or bundles), and by taking extra precautions in temperatures below 40 degrees F (4 degrees C).
 3. Handle carefully in hot weather to avoid scuffing the surfacing, or damaging the shingle edges.
- B Placement and Nailing: Secure with 4, 5, or 6 nails per shingle per GAF®'s application instructions or local codes.
2. Placement of nails varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.
 3. Nails must be driven flush with the shingle surface. Do not overdrive or under drive the nails.
 4. Shingle offset varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.
- C Placement and Nailing: Beginning with the starter strip, trim shingles so that they "nest" within the shingle located beneath it. This procedure will yield a first course that is typically 3 inch (76mm) to 4 inch (102mm) rather than a fully exposed shingle.
2. Laterally, offset the new shingles from the existing keyways, to avoid waves or depressions caused by excessive dips in the roofing materials.
 3. Using the bottom of the tab on existing shingles, align subsequent courses.
 4. *Note: DO NOT install standard sized shingles (5inch exposure) over metric (5 5/8 inch exposure) shingles, as it will overexpose the shingles and reveal the nails. Use standard alignment methods to assure proper shingle placement.
 5. Secure with 4, 5, or 6 nails per shingle per GAF®'s instructions or local codes.
 6. Placement of nails varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.
 7. Nails must be driven flush with the shingle surface. Do not overdrive or under drive the nails.
 8. Shingle offset varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.
- D Valleys Install valleys using the "open valley" method:
- a Snap diverging chalk lines on the metal flashing, starting at 3 inches (76mm) each side of top of valley, spreading at 1/8 inch per foot (9mm per meter) to the eaves.
 - b Run shingles to chalk line.
 - c Trim last shingle in each course to match the chalk line; do not trim shingles to less than 12 inches (305mm) wide.
 - d Apply a 2 inch (51mm) wide strip of plastic cement under ends of shingles, sealing them to the metal flashing.
2. Install valleys using the "closed cut valley" method:
- a Run the first course of shingles from the higher roof slope across the valley at least 12 inches (305mm).
 - b Run succeeding courses of shingles from the lower roof slope across the valley at least 12 inches (305mm) and nail not closer than 6 inches (152mm) to center of valley.

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

- c Run shingles from the upper roof slope into the valley and trim 2 inches (51mm) from the center line.
- 3. Install valleys using "woven valley" method: Run shingles from both roof slopes at least 12 inches (305mm) across center of valley, lapping alternate sides in a woven pattern.
 - b DO NOT nail less than 6 inches (152mm) from the valley center line.

E Penetrations

- 1. All Penetrations are to be flashed according to GAF®, ARMA and NRCA application instructions and construction details.

F Skylights and Roof Hatches

- 1. Consult the manufacturer of the skylight or roof hatch for specific installation recommendations.
- 2. Skylights and roof hatches shall be installed with pre-fabricated metal flashings specifically designed for the application of the unit.

2.09 INSTALLATION OF ATTIC VENTILATION

A General

- 1. Ventilation must meet or exceed current F.H.A., H.U.D. and local code requirements.

B Ridge / Soffit ventilation

- 1. Install ridge vent along the entire length of ridges:
- 2. Cut continuous vent slots through the sheathing, stopping 6 inches (152mm) from each end of the ridge.
- 3. On roofs without ridge board, make a slot 1 inch (25mm) wide, on either side of the peak (2 inch (51mm) overall).
- 4. On roofs with ridge board, make two slots 1-3/4 inches (44.5mm) wide, one on each side of the peak (3 ½ inch (89mm) overall).
- 5. Install ridge vent material along the full length of the ridge, including uncut areas.
- 6. Butt ends of ridge vent material and join using roofing cement.
- 7. Install eaves vents in sufficient quantity to equal or exceed the ridge vent area.

C Roof and Gable Louvers:

- 1. Cut vent hole through sheathing as specified by the manufacturer for the type of vent to be installed.
- 2. Install a 24 inches (610mm) square of leak barrier, centered around the hole for roof louvers
- 3. Install according to manufacturers instructions for flashing vent penetrations
- 4. Install eave vents in sufficient quantity to equal or exceed the exhaust vent area, calculated as specified by manufacturer.

D Powered (& Solar Powered) Ventilators & Roof turbines:

- 1. Cut vent hole through sheathing as specified by the manufacturer for the type of vent to be installed.
- 2. On rooftop applications, install a 36 inches (914mm) square of leak barrier, centered around the hole
- 3. Install according to manufacturers instructions for flashing vent penetrations

GAF ASPHALT SHINGLE GUIDE SPECIFICATION

4. Install eave vents in sufficient quantity to equal or exceed the exhaust vent area, calculated as specified by manufacturer

E Hip Vents and Rooftop Vents

1. Install according to manufacturer's instructions.
2. Install vents in sufficient quantity to equal or exceed the exhaust vent area, calculated as specified by manufacturer.

F Whole House Fans

1. Install at desired locations in ceiling below attic space per manufacturer recommended location and application instructions.

2.10 INSTALLATION OF VENTILATION ACCESSORIES

A Chimney Caps

1. Install chimney caps to manufacturer recommendations

B Foundation Vents

1. Install foundation vents per manufacturer recommendations and applications.

2.11 PROTECTION

- A Protect installed products from foot traffic until completion of the project.
- B Any roof areas that are not completed by the end of the workday are to be protected from moisture and contaminants.

END OF SECTION

**Lifetime Roofing System
Limited Warranty
The Legal Stuff**
(RESWT160)

Updated: 9/16



*Quality You Can Trust...From
North America's Largest Roofing Manufacturer!™*

The GAF Shingle & Accessory Limited Warranty

Congratulations! Thank you for purchasing asphaltic shingles and/or accessories from GAF, North America's largest roofing manufacturer – your best and safest choice. While many factors can affect how long your shingles and accessories will last, this Shingle & Accessory Limited Warranty covers your asphaltic shingles and accessories, including GAF Ridge Cap Shingles, GAF Starter Strip Shingles, GAF Leak Barrier Products, GAF Roof Deck Protection Products, and GAF Cobra® Ventilation Products, in the unlikely event that they contain a manufacturing defect. It provides great coverage that is “non-prorated” during the crucial up-front period of your ownership (the Smart Choice® Protection Period) with continued coverage for extended periods of time afterwards. Note: This warranty does not cover low-slope membranes, Master Flow® Ventilation Products, and ShingleMatch™ Roof Accessory Paint. Please go to gaf.com for a copy of the limited warranties covering these products.

How Long Your Warranty Lasts

Manufacturing Defects: GAF Lifetime Asphaltic Shingles. Subject to the provisions below, all GAF Asphaltic Shingles other than Sentinel®, Royal Sovereign®, and Marquis WeatherMax® Shingles and Ridge Cap and Starter Strip Shingles carry a Lifetime warranty (as defined below) against manufacturing defects and a Smart Choice® Protection Period of 10 years.

Manufacturing Defects: Other GAF Asphaltic Shingles. Marquis WeatherMax® Shingles are warranted against manufacturing defects for 30 years; Royal Sovereign® Shingles are warranted for 25 years, and Sentinel® Shingles are warranted for 20 years. The Smart Choice® Protection Period is 5 years for Marquis WeatherMax® and Royal Sovereign® Shingles, and 3 years for Sentinel® Shingles. The warranty term and Smart Choice® Protection Period for Ridge Cap and Starter Strip Shingles are described below.

Manufacturing Defects: GAF Accessories Used With Any Brand Of Lifetime Asphaltic Shingles. When you install three or more of the GAF Accessory Products listed above on your roof with any brand of Lifetime Asphaltic Shingles, your GAF Accessory Products carry a Lifetime warranty (as defined below) against manufacturing defects and a Smart Choice® Protection Period of 10 years. When you install fewer than three of the above-listed GAF Accessories on your roof with any brand of Lifetime Asphaltic Shingles, your GAF Accessory Products carry a 40-year warranty against manufacturing defects and a Smart Choice® Protection Period of 5 years.

Manufacturing Defects: GAF Accessories Used With Any Other Asphaltic Shingles. When you install one or more of the above-listed GAF Accessories on your roof with any brand of non-Lifetime Asphaltic Shingles, your GAF Accessory Products carry a 25-year warranty against manufacturing defects and a Smart Choice® Protection Period of 5 years.

Definition Of Lifetime: The word “Lifetime” means as long as you, the original owner(s) [or the second owner(s) if coverage was properly transferred during the

Smart Choice® Protection Period], own the property where the shingles and/ or accessories are installed. The Lifetime warranty and 10-year Smart Choice® Protection Period are applicable only to shingles and accessories installed on a single-family detached residence owned by individuals. For any other type of owner or building, such as a corporation, governmental entity, religious entity, condominium or homeowner association, school, apartment building, office building, or multi-use structure, the length of the warranty is 40 years and the Smart Choice® Protection Period is 5 years.

Failure To Seal/Blow-offs/Wind Damage. GAF Lifetime Shingles, Timbertex® Premium Ridge Cap Shingles, and Ridglass® Premium Ridge Cap Shingles are warranted against failure to seal, blow-offs, and wind damage for 15 years. All other shingles (other than starter strips) and other ridge cap shingles are covered for 5 years. There is no coverage for failure to seal/blow-offs/wind damage for any other GAF Accessory Products.

Algae Discoloration. All StainGuard®-labeled Shingles and Ridge Cap Shingles are warranted against algae discoloration for 10 years. There is no coverage for algae discoloration for any other GAF Accessory Products.

Who Is Covered By This Limited Warranty; Transferability.

You are covered by this warranty if you live in the United States or Canada and are the original property owner (i.e., not a builder or installer) or the first subsequent owner if this warranty was properly transferred.

This limited warranty may be transferred **only** once. The second owner must notify GAF in writing within **60 days** after the property transfer for warranty coverage to be transferred. (Other than this one transfer, this warranty may **not** be transferred or assigned, directly or indirectly.) If the transfer takes place within the Smart Choice® Protection Period, the second owner is entitled to the same coverage as the original owner. If the transfer takes place afterwards, the length of this warranty shall be reduced to the two-year period after the ownership changes. If there is a defect during this two-year period, GAF's reimbursement to the second owner will be based only on the reasonable cost of replacement shingles or applicable accessories, reduced by the amount of use that has been received from the shingles or applicable accessories from date of installation through the date of claim.

Manufacturing Defects: What Is Covered/Sole And Exclusive Remedy.

GAF Warranty Company, LLC, a subsidiary of GAF, warrants that your GAF Roofing Shingles will remain free from manufacturing defects that adversely affect their performance during the applicable Smart Choice® Protection Period or that cause leaks for the remainder of the applicable warranty term and that your GAF Accessory Products will remain free from manufacturing defects that adversely affect their performance during the applicable warranty term.

Note: Failure to seal/blow-offs/wind damage and algae discoloration are covered separately below.

(1) During the Smart Choice® Protection Period: GAF will pay you the full reasonable cost of labor to repair or re-cover any defective GAF Shingles or Accessories (excluding non-GAF accessories, metal work, or flashing) and will provide replacement shingles or accessories or the reasonable cost of obtaining replacement shingles or accessories, at GAF's option. GAF will not pay to tear off your shingles or accessories, or to dispose of them.

(2) After the Smart Choice® Protection Period: Labor will no longer be covered. GAF's contribution to you will be based on either providing you with replacement GAF Shingles or Accessories, or at GAF's choice, reimbursing you for the reasonable cost of replacement shingles or accessories. The amount of shingles, accessories, or reimbursement provided to you will be reduced to reflect the use you have received from your shingles or accessories. The amount of use will be calculated by dividing the number of months which have elapsed since installation to the date of claim by the number of months in the warranty term. For a Lifetime warranty, the number of months in the warranty term is deemed to be 600 for years 11 – 40 of the warranty term. For years 41 and beyond of a Lifetime warranty, GAF's contribution is 20%. For example, if you make a claim for Lifetime Shingles installed on a single-family home after your shingles have been installed for 25 years (300 months), GAF's contribution will be reduced by 300/600 or 50%.

Failure To Seal/Blow-Offs/Wind Damage: What Is Covered/Sole And Exclusive Remedy.

This Limited Failure to Seal/Blow-offs/Wind Damage Warranty is **specifically conditioned** on your shingles or ridge cap shingles being fastened and installed **strictly** in accordance with GAF's application instructions. This warranty does not apply to starter strip shingles. GAF warrants to you that your GAF Shingles or Ridge Cap Shingles will not fail to seal, blow off, or sustain damage from winds (including gusts) up to the applicable wind speed listed on the reverse after your shingles or ridge cap shingles should have sealed but did not due to a manufacturing defect. If your shingles or ridge cap shingles do fail to seal, blow off, or suffer wind damage, GAF will reimburse you for the reasonable costs of replacing the blown-off or damaged shingles or ridge cap shingles and hand-sealing any unsealed shingles or ridge cap shingles. Costs related to underlayment, metal work, and flashings are not included. GAF's **maximum** liability under this paragraph is to reimburse you for the cost of hand-sealing all of the shingles or ridge cap shingles on your roof.

SEE REVERSE FOR LIMITATIONS AND EXCLUSIONS

Continued on back cover...

Shingle	Wind Speed Coverage with special installation (mph / km/h)	Wind Speed Coverage without special installation (mph / km/h)
All GAF Lifetime Shingles	130/209*	110/175
Marquis WeatherMax®	N/A	80/130
Royal Sovereign® & Sentinel®	N/A	60/96
*Your shingles will be covered up to the maximum wind speed above ONLY if your shingles are installed using 6 nails per shingle and you have GAF Starter Strip Products installed at the eaves and rakes.		
Ridge Cap Shingle	Wind Speed Coverage with special installation (mph / km/h)	Wind Speed Coverage without special installation (mph / km/h)
Timbertex® & Ridglass®	130/209**	110/175
All other GAF Ridge Cap Shingles	90/144**	70/112
**Your ridge cap shingles will be covered up to the maximum wind speed above ONLY if your ridge cap shingles are installed in strict accordance with the "Maximum Wind Speed Coverage Under Ltd. Warranty" section of the applicable ridge cap shingle application instructions.		

Note: All self-sealing shingles and ridge cap shingles, including GAF's, must be exposed to warm, sunny conditions for several days before they completely seal. Before sealing occurs, shingles and ridge cap shingles are vulnerable to blow-offs and wind damage. Shingles and ridge cap shingles installed in fall or winter may not seal until the following spring. Shingles or ridge cap shingles that are not exposed to direct sunlight or adequate surface temperatures or that are not fastened or installed properly may never seal. Failures to seal, blow-offs, and wind damage under these circumstances result from the nature of self-sealing shingles and ridge cap shingles, not a manufacturing defect, and are not covered under this warranty.

Algae Discoloration: What Is Covered/Sole And Exclusive Remedy.
This StainGuard® Limited Warranty applies only to shingles and ridge cap shingles sold in packages bearing the StainGuard® logo. GAF warrants to you that blue-green algae (also known as cyanobacteria) will not cause a pronounced discoloration of your **StainGuard®-labeled** Shingles or Ridge Cap Shingles. During the **first year**, if your StainGuard®-labeled Shingles or Ridge Cap Shingles exhibit a pronounced discoloration caused by blue-green algae, GAF's contribution will be either the reasonable cost of commercially cleaning your shingles or ridge cap shingles or, at GAF's option, replacing discolored shingles or ridge cap shingles, up to a **maximum** of the original cost of the affected shingles or ridge cap shingles. During the **remainder** of the StainGuard® Limited Warranty period, GAF's contribution to you will be reduced to reflect the amount of use you have received from your shingles or ridge cap shingles since your shingles or ridge cap shingles were installed (100%, reduced by a percentage equal to the number of months from the installation date to the date of claim divided by 120).
Note: Preventing pronounced algae-related discoloration of your shingles or ridge cap shingles is achieved through formulations or through unique blends of granules.

What Is Not Covered.
Even if your shingles or accessories were not properly installed according to GAF's application instructions or to standard good roofing practices, this limited warranty remains in effect. However, GAF will **NOT** compensate you for:
(1) Damages resulting from anything other than an inherent manufacturing defect in your shingles or accessories, such as:
(a) Improper fastening of your shingles or accessories or application not in strict accordance with GAF's printed application instructions, if the improper installation was the cause of the damage.
(b) Settlement, movement, or defects in the building, walls, foundation, or the roof base over which the shingles or accessories were applied.
(c) Inadequate attic ventilation.
(2) Damages resulting from causes beyond normal wear and tear, such as:
(a) acts of nature, such as hail, fire, winds (including gusts) over the applicable wind speed listed above, or ice damming above the areas of your roof deck covered by a GAF Leak Barrier.
(b) impact of foreign objects or traffic on the roof.
(c) improper storage or handling of shingles or accessories.
(3) Shading or variations in the color of your shingles or ridge cap shingles or discoloration or contamination caused by fungus, mold, lichen, algae (except for blue-green algae if your shingles or ridge cap shingles were labeled with the StainGuard® logo), or other contaminants, including that caused by organic materials on the roof.
(4) Labor costs, except as specifically provided for above, disposal costs, tear-off costs, and costs related to underlayments (unless your claim involves a manufacturing defect in a GAF Underlayment), metal work, and flashings.
(5) Damage to the interior or exterior of the building, including, but not limited to, mold growth.

Other Limitations Concerning Coverage.
Decisions as to the extent of repair, re-cover, or cleaning required, and the reasonable cost of such work, will be made solely by GAF. GAF reserves the right to arrange directly for your shingles or accessories to be repaired, re-covered, or cleaned instead of reimbursing you for such work. The remedy under this warranty is available only for those shingles and accessories actually exhibiting manufacturing defects or algae discoloration at the time your claim is settled. Any replacement shingles or accessories will be warranted only for the remainder of the original warranty period. GAF reserves the right to discontinue or modify its shingles or accessories, including the colors available, so any replacement shingles or accessories may not be an exact match for the shingles or accessories on your roof. Even if GAF does not modify a color, replacement shingles or accessories may not match your original shingles or accessories due to normal weathering, manufacturing variations, or other factors.

Claims: What You Must Do.
You must notify GAF about any claim within **30 days** after you notice a problem and provide proof of the date your shingles or accessories were applied and that you were the owner at that time (or that the warranty was properly transferred to you). If you are claiming a Lifetime warranty on any GAF

Accessories, you must also provide proof of the date(s) your three or more GAF Accessories and Lifetime Shingles were applied. You must either call GAF at 1-800-458-1860 about your claim, or send a notice to GAF in writing to: GAF, Warranty Services, 1 Campus Drive, Parsippany, NJ 07054, USA. You will then be provided with complete details about submitting your claim. GAF may require you to send to GAF, at your expense, sample shingles or accessories for testing and photographs. Within a reasonable time after proper notification, GAF will evaluate your claim and resolve it in accordance with the terms of this limited warranty. If you repair or replace your GAF Products before you notify GAF about your claim or before GAF has completed its evaluation of your claim, your claim may be denied. If you need to repair or replace your GAF Products before your claim is resolved, you **MUST** provide GAF with reasonable notice. **NOTE: Notice to your contractor, dealer, or home builder is NOT notice to GAF.** You should retain this document for your records in the unlikely event that you need to file a claim.

Sole And Exclusive Warranty.
THIS LIMITED WARRANTY IS EXCLUSIVE AND REPLACES ALL OTHER WARRANTIES, CONDITIONS, REPRESENTATIONS AND GUARANTEES, WHETHER EXPRESS OR IMPLIED, WHETHER BY STATUTE, AT LAW OR IN EQUITY, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. This limited warranty is your exclusive warranty from GAF and represents the **SOLE REMEDY** available to any owner of GAF Shingles or Accessories. GAF makes **NO OTHER REPRESENTATIONS, CONDITIONS, GUARANTEES, OR WARRANTIES** of any kind other than that stated herein. GAF **WILL NOT BE LIABLE** IN ANY EVENT FOR CONSEQUENTIAL, PUNITIVE, SPECIAL, INCIDENTAL, OR OTHER SIMILAR DAMAGES OF ANY KIND, including **DAMAGE TO THE INTERIOR OR EXTERIOR OF ANY BUILDING**, whether any claim against it is based upon breach of this warranty, negligence, strict liability in tort, or for any other cause. Some jurisdictions do not allow limitations on or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

The United Nations Convention on Contracts for the Sale of International Goods shall **NOT** apply either to the sale of the GAF products or to this limited warranty.

Modification Of Warranty.
This limited warranty may not be changed or modified except in writing, signed by an officer of GAF. No one (other than an officer of GAF) has the authority to assume any additional or other liability or responsibility for GAF in connection with your shingles or accessories except as described in this warranty. (**Note:** Warranty subject to change. For current information, visit gaf.com or write to GAF at 1 Campus Drive, Parsippany, NJ 07054, USA, Attn: Warranty Services.)

Effective Date.
This limited warranty is effective for GAF Asphaltic Shingles and GAF Accessories installed after September 1, 2014.



Quality You Can Trust...From
North America's Largest Roofing Manufacturer!™



DYNACLAD® KYNAR 500® COATING 20 Year Limited Warranty

LITHO IN U.S.A.

Dimensional Metals, Inc. (DMI) warrants for a period of twenty (20) years after Customer's shipment of painted products that Dimensional Metal's standard color, Medium Gloss DynaClad coil coatings (Coatings) when applied on Galvalume, HDG-90 steel and aluminum substrate will not:

- A. Peel, flake or otherwise lose adhesion to an extent that is apparent on ordinary outdoor visual observation.
- B. Change color more than 5 Delta E Units when measured per ASTM D-2244 on clean surface.
- C. Chalk more than a number eight (8) rating when measured per ASTM D-4214.

TERMS AND CONDITIONS

1. It is acknowledged that fading or color change may not be uniform if the surfaces are not equally exposed to the sun and elements. DMI recommends that there be a systematic fresh water rinse maintenance program in effect in areas of high salt concentration (such as adjacent to the seashore and/or industrial atmospheres) so as to prevent the accumulation of concentrated mineral deposits.
2. This Limited Warranty covers DMI Coatings exposed to normal atmospheric conditions and specifically excludes corrosive or aggressive atmospheres including direct salt spray. This Limited Warranty shall not apply where coating failure is the result of physical damage resulting from fabrication or embossing operations, corrosion due to cut edge exposure, salt spray, acts of God, vandalism, any negligent acts of the Customer including, but not limited to, improper packaging, storage, shipping, or, installation which prohibit proper drainage of standing water or other such occurrences beyond DMI's control.
3. DMI's liability shall not exceed the Customer's liability and the Customer's exclusive remedy for any breach of this Limited Warranty or failure of the Coatings is strictly limited to the direct cost of refinishing or replacing the failed coated metal. Refinishing of the failed coated metal shall be performed by using standard finishing practices and materials. DMI will, in all instances, be the sole judge as to whether refinishing or replacement of the failed areas is required to fulfill its obligation under this Limited Warranty and reserves the right to approve and negotiate the contract.
4. This Limited Warranty shall not be extended by the refinishing or replacement of the coated material, but the remaining warranty period shall continue in effect and be applicable to the refinished or replaced areas under the terms and conditions of the Limited Warranty.
5. Claims under this Limited Warranty must be presented in writing during the warranty period and within sixty (60) days after Customer becomes aware that any warranted condition has occurred. Time is of the essence and failure to give notice within the specified time shall discharge DMI from any obligations under this Limited Warranty. DMI must be given a reasonable opportunity to an on-site inspection to determine the cause and the corrective action to be taken if it is determined to be a Coating failure.
6. THIS LIMITED WARRANTY IS GIVEN AS THE EXCLUSIVE WARRANTY AND REMEDY, AND DMI DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. DMI SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. THE CUSTOMER'S EXCLUSIVE REMEDY SHALL BE THAT SET FORTH IN PARAGRAPH 3 FOR ANY CLAIM OF LIABILITY RELATING TO THE COATINGS UNDER NEGLIGENCE, STRICT LIABILITY, BREACH OF WARRANTY, OR ANY OTHER LEGAL THEORY.
7. This Limited Warranty is extended to Customer alone, is nontransferable and non-assignable, and may not be modified or enlarged in its scope by any representative, salesman, agent, or other employee of DMI. Customer shall not permit anyone to claim or imply that this Limited Warranty extends to anyone other than Customer. This condition is a material term of this Limited Warranty and its violation by Customer or its agents or representatives shall release DMI from its obligations hereunder.
8. This Limited Warranty shall be governed by and interpreted in accordance with the laws of the State of Ohio. Jurisdiction and venue for any dispute concerning the roof or this Limited Warranty are fixed in Franklin County, Ohio.

XXXXXXX

Project Name

XXXXXXX

Address

XXXXXXX

City

XX

State

XXXXX

Zip

Material Description

XXXXXXX

Sold To

XXXXXXX

Address

XXXXXXXXX

City

XX

State

XXXXXX

Zip

Invoice/ (Order Number)

Effective Date

Dimensional Metals, Inc.

58 Klema Drive North - Reynoldsburg, OH 43068 - (740) 927-3633

Signature

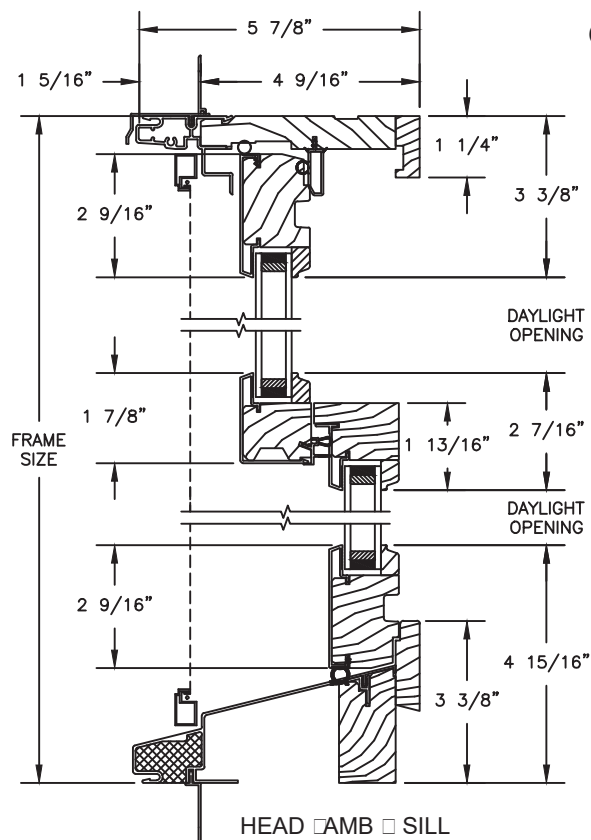
Title

Date

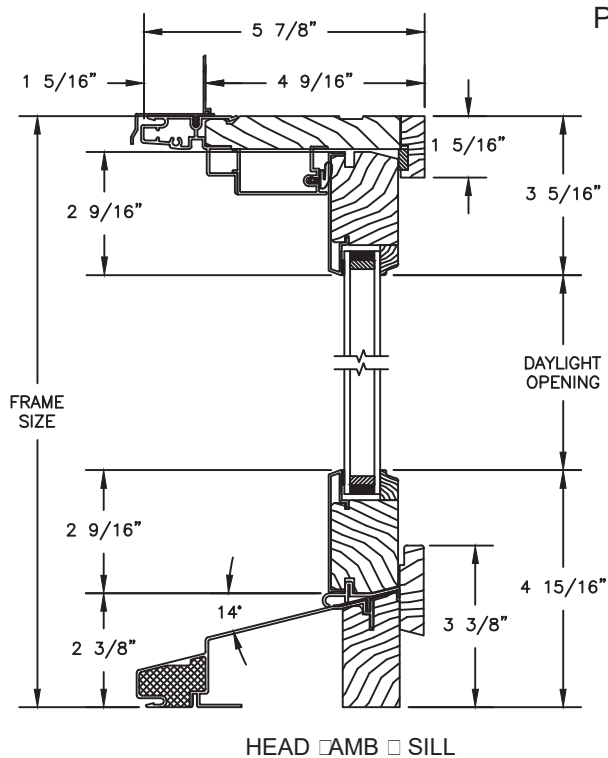
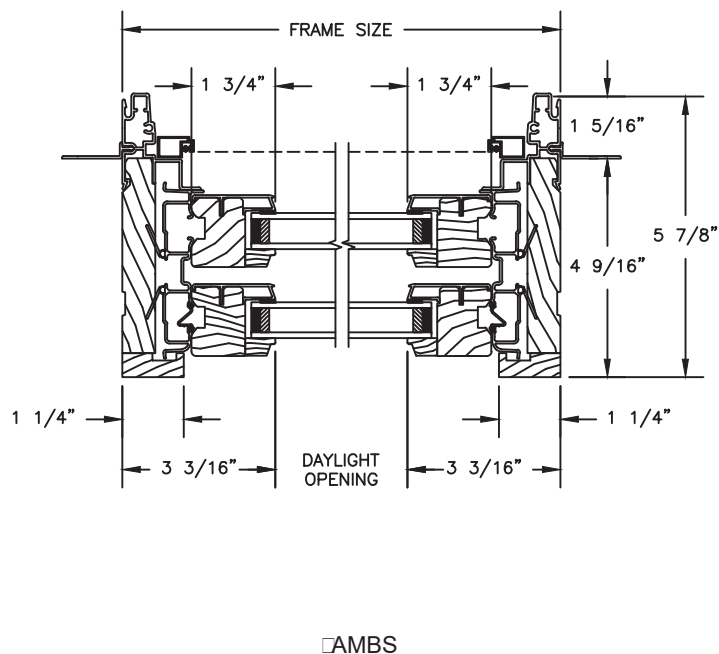
CLAD DOUBLE HUNG

SECTION DETAILS : OPERATING ☐ PICTURE

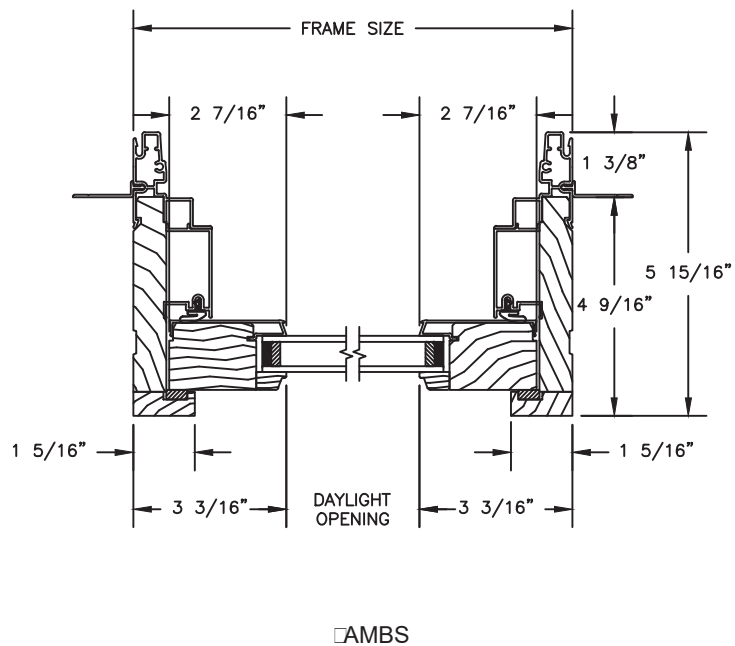
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OPERATING



PICTURE



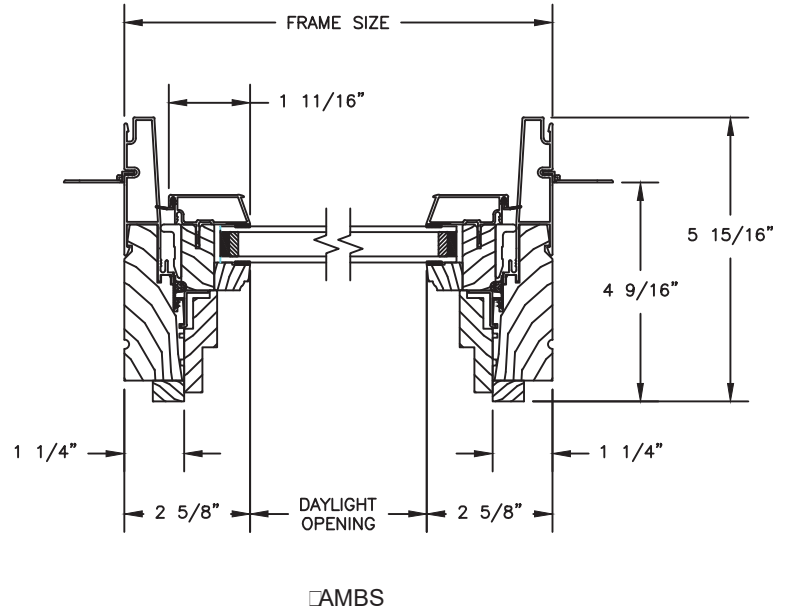
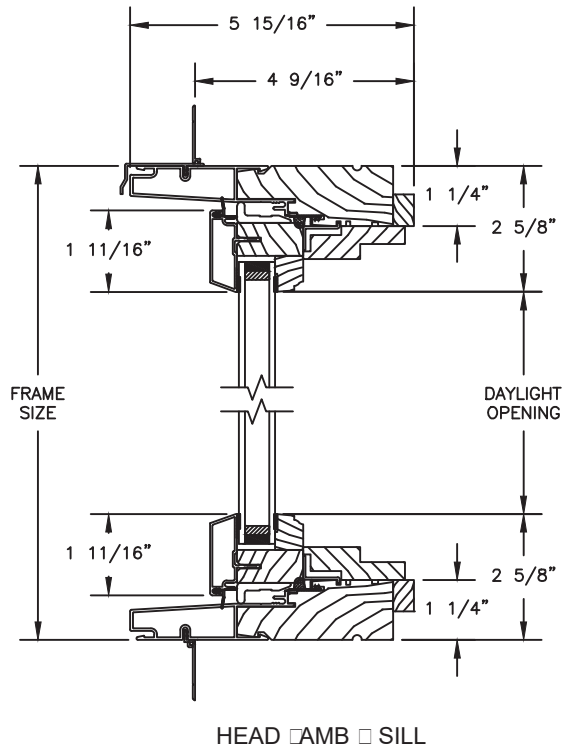
P S r

CLAD DOUBLE HUNG

SECTION DETAILS : TRANSOM

SCALE: 3" = 1'-0"

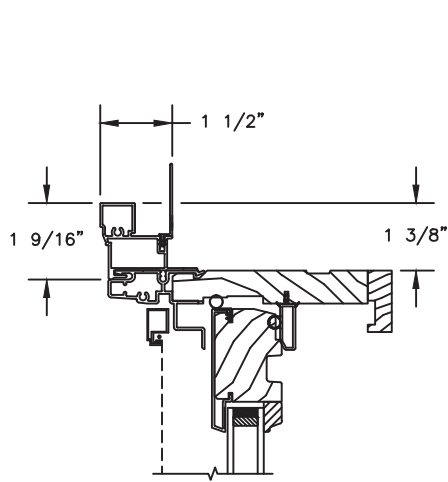
TRANSOM



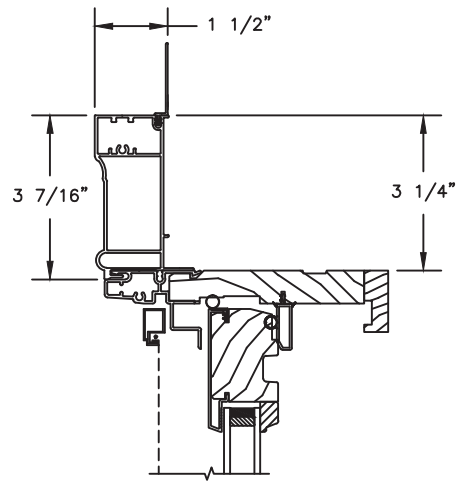
CLAD DOUBLE HUNG

SECTION DETAILS : CASING OPTIONS

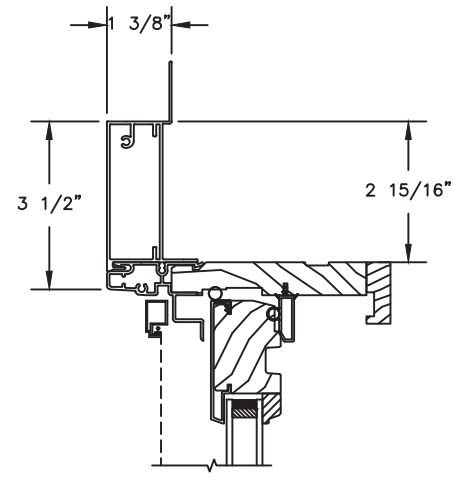
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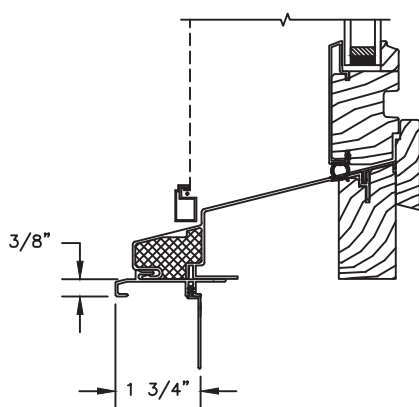
HEAD □AMB WITH
CLAD BRIC□MOULD CASING



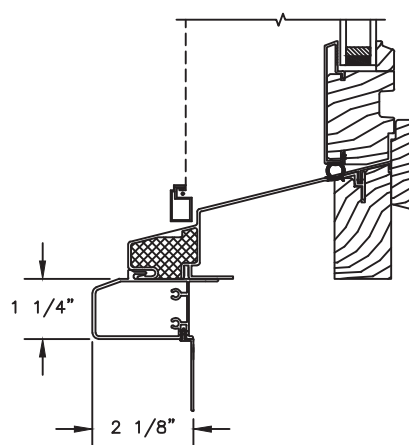
HEAD □AMB WITH
CLAD WILLIAMSBURG CASING



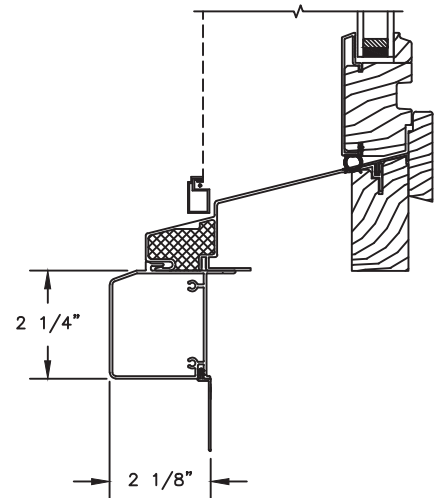
HEAD □AMB WITH
3 1/2" CLAD FLAT CASING



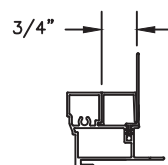
SILL WITH
3 □" CLAD SUBSILL



SILL WITH
1 1/4" CLAD SUBSILL



SILL WITH
2 1/4" CLAD SUBSILL



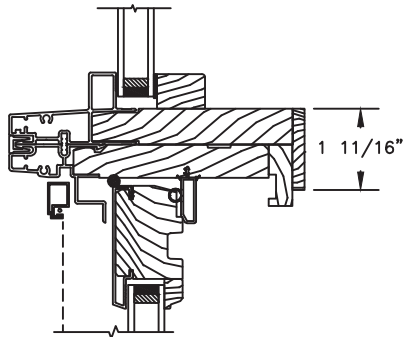
CLAD BRIC□MOULD CASING
WITH OPTIONAL □CHANNEL COVER

P S r

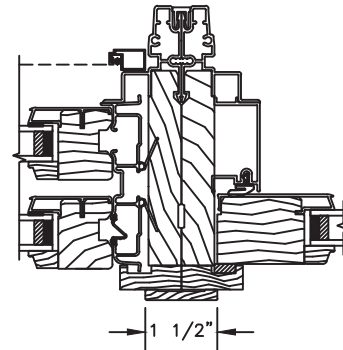
CLAD DOUBLE HUNG

SECTION DETAILS : MULLIONS

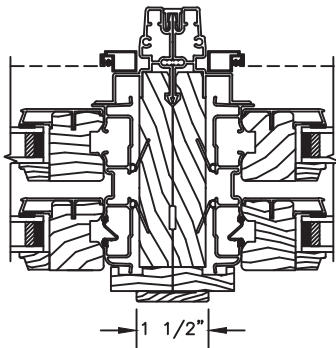
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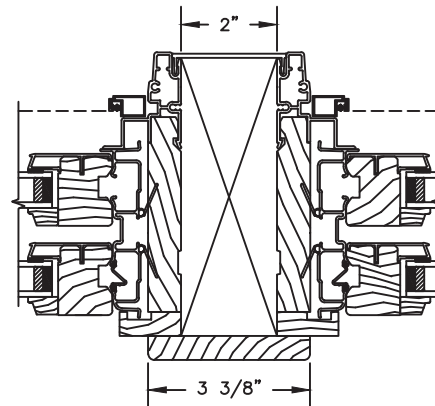
HORIZONTAL MULLION
RADIUS OPERATOR



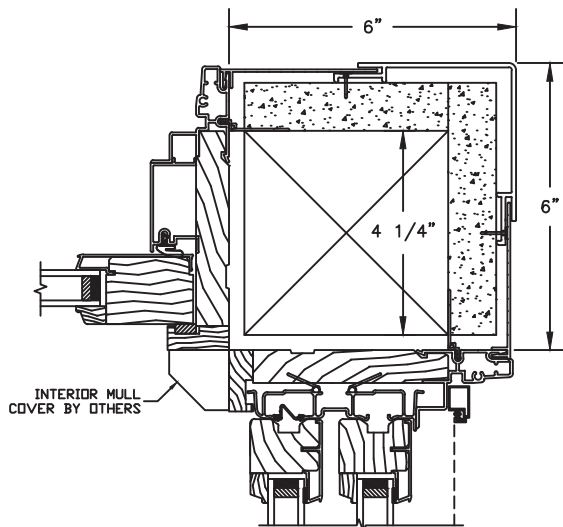
VERTICAL MULLION
OPERATOR PICTURE



VERTICAL MULLION
OPERATOR OPERATOR

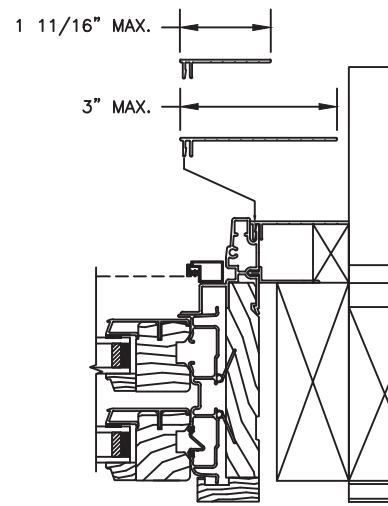


VERTICAL MULLION WITH
2" SPREAD MULL
ADDITIONAL WIDTHS INCLUDE:
2 1/2" 4" 4"



90° MULLION
PICTURE OPERATOR

ONLY USED WITH 4" AMB 3 1/4" FRAME EXPANDER



NOTE:
FOR INFORMATION ON STRUCTURAL MULLIONS REFER TO
THE PRODUCT PERFORMANCE AND INFORMATION SECTION.

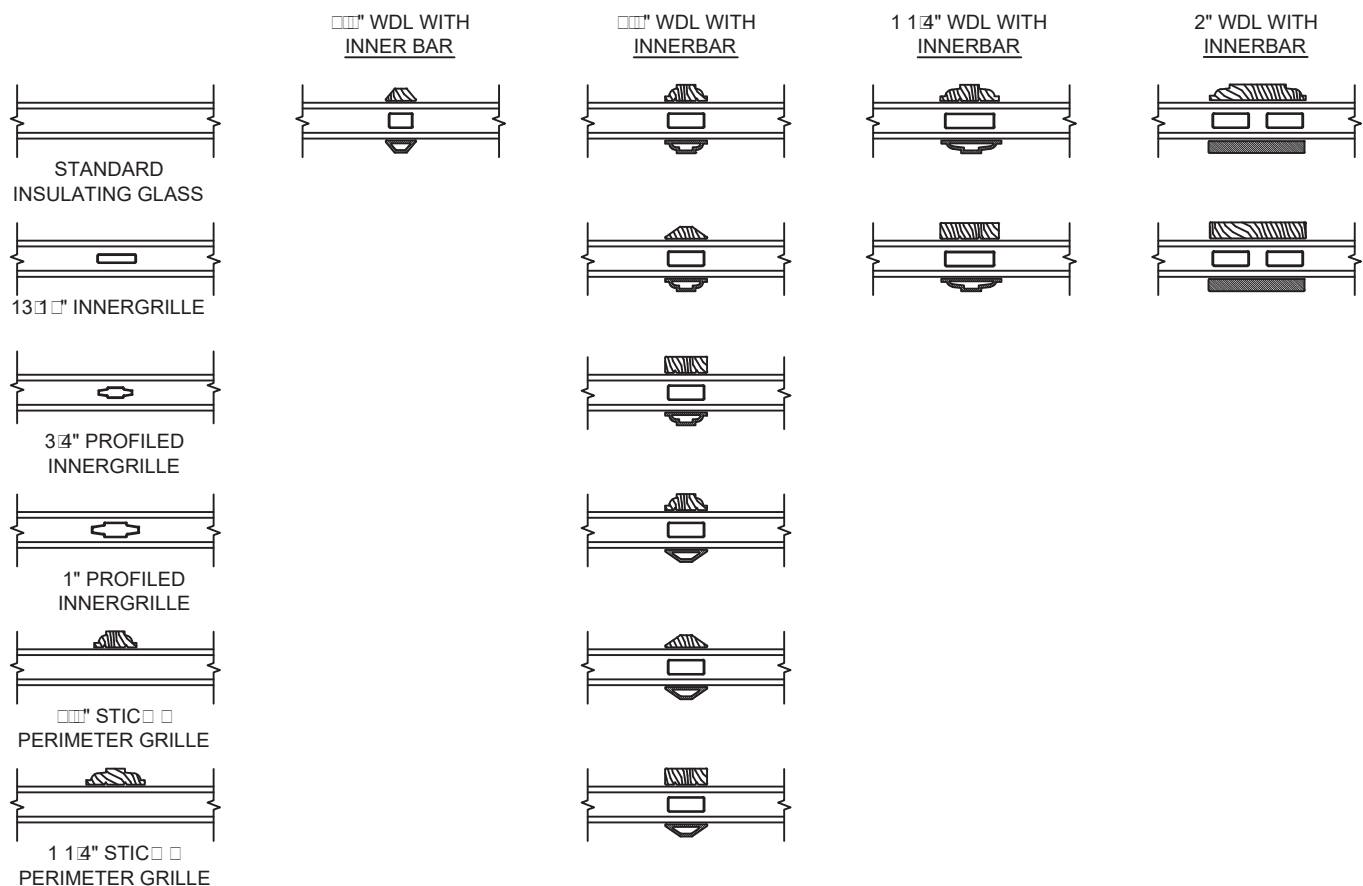
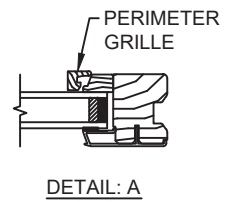
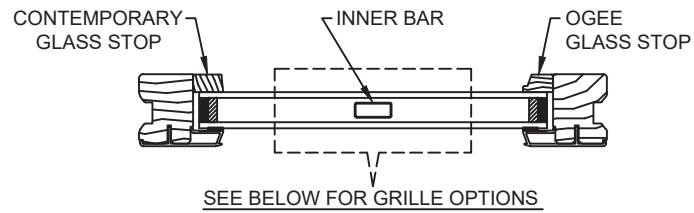
CLAD DOUBLE HUNG

SECTION DETAILS : DIVIDED LITE OPTIONS

SCALE: 3" = 1'-0"

AVAILABLE STYLES

-  PUTTY
-  OGEE
-  CONTEMPORARY



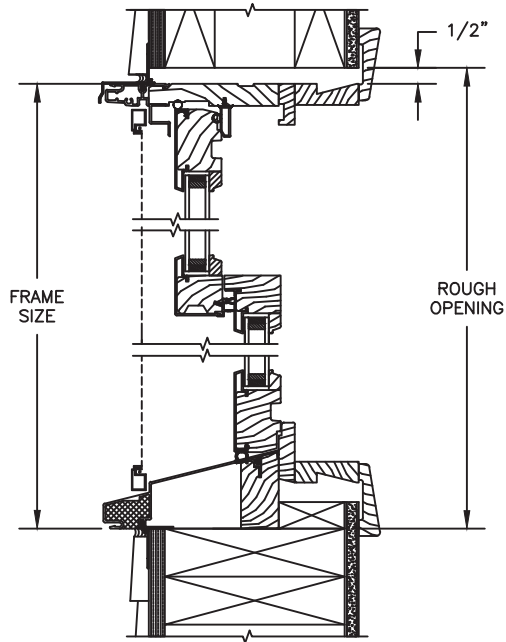
NOTE:

- ALL WDL OPTIONS CAN BE ORDERED WITH OR WITHOUT INNER BAR
- PERIMETER GRILLES ONLY AVAILABLE IN THE 1 1/4" AND 1 1/4" OGEE STYLE GLASS STOP SEE DETAIL: A

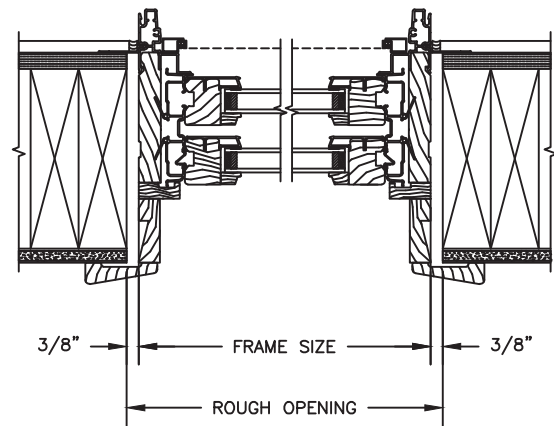
CLAD DOUBLE HUNG

SECTION DETAILS : CONSTRUCTION

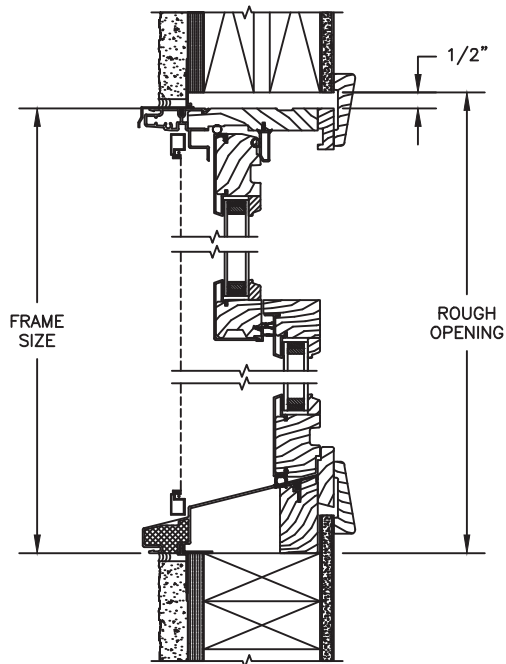
SCALE: 2" = 1'-0"



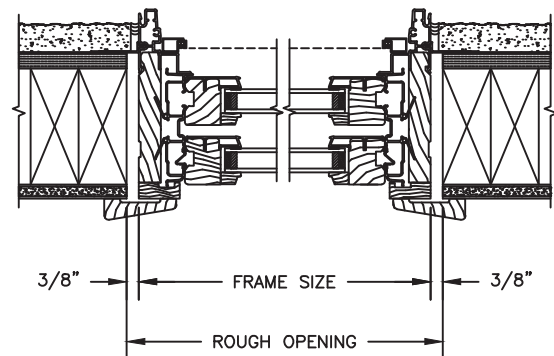
HEAD ☐ AMB ☐ SILL
2 X 4 FRAME WITH SIDING



HEAD ☐ AMB ☐ SILL
2 X 4 FRAME WITH SIDING



HEAD ☐ AMB ☐ SILL
2 X 4 FRAME WITH STUCCO



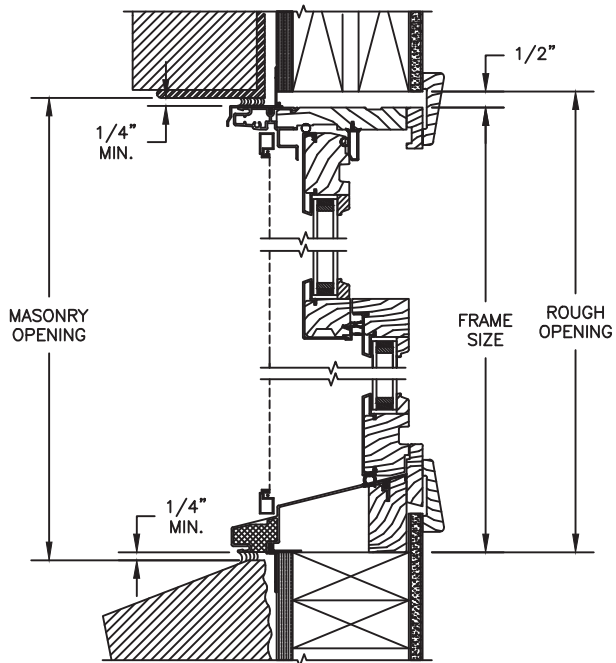
☐ AMBS
2 X 4 FRAME WITH STUCCO

NOTE :
THE ABOVE WALL SECTIONS REPRESENT TYPICAL WALL CONDITIONS, THESE DETAILS ARE NOT INTENDED AS INSTALLATIONS INSTRUCTIONS. PLEASE REFER TO THE INSTALLATION INSTRUCTIONS PROVIDED WITH THE PURCHASED UNITS.

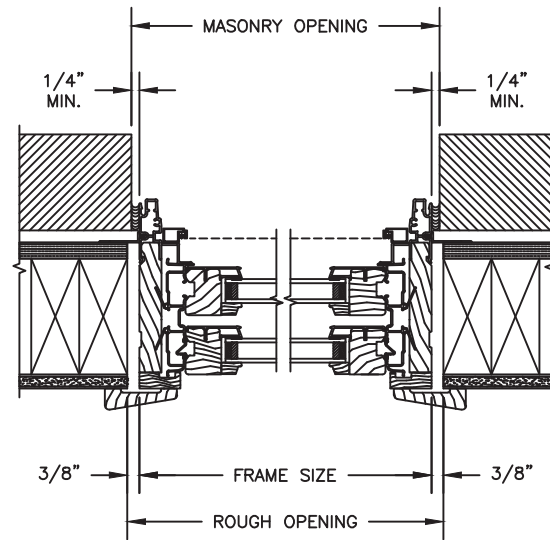
CLAD DOUBLE HUNG

SECTION DETAILS : CONSTRUCTION

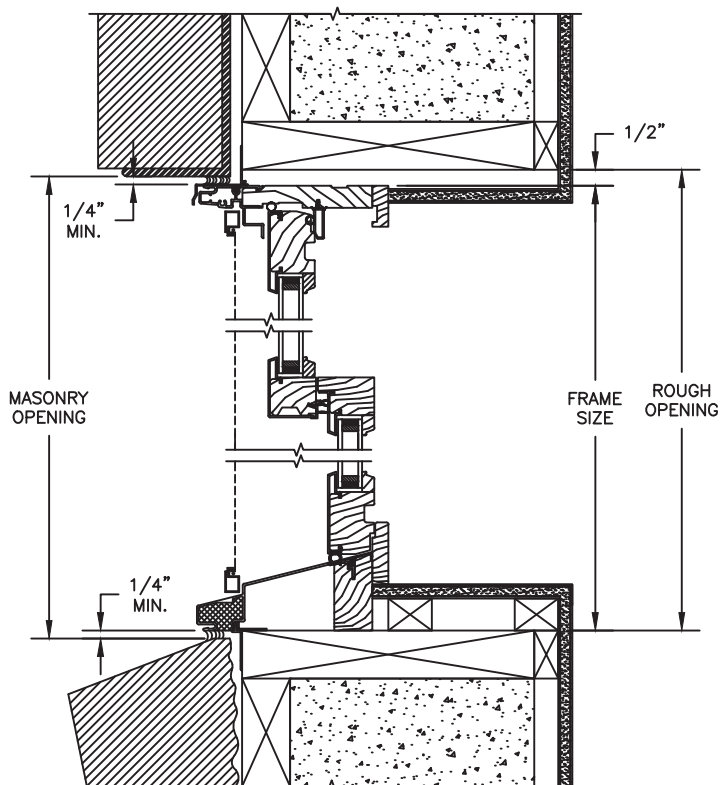
SCALE: 2" = 1'-0"



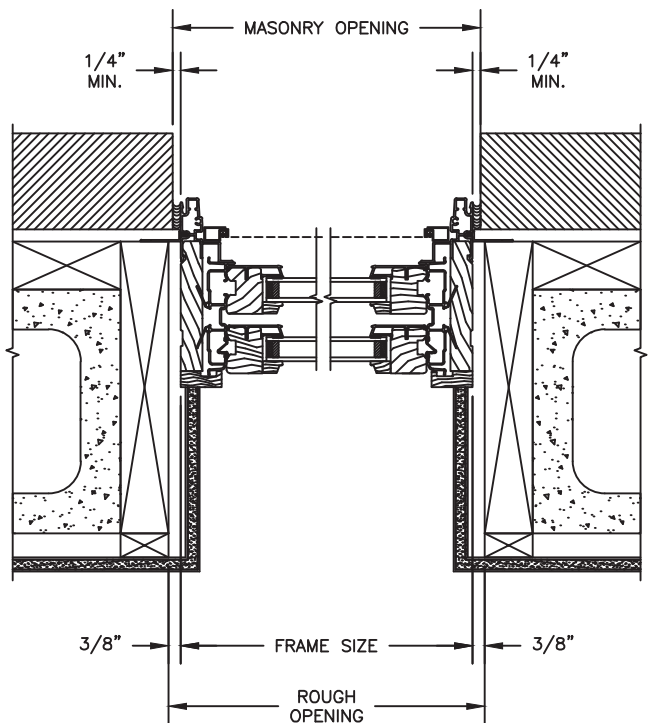
HEAD JAMB SILL
2 X 4 FRAME WITH BRICK VENEER



JAMB
2 X 4 FRAME WITH BRICK VENEER



HEAD JAMB SILL
2" CONCRETE BLOCK WALL
WITH BRICK VENEER

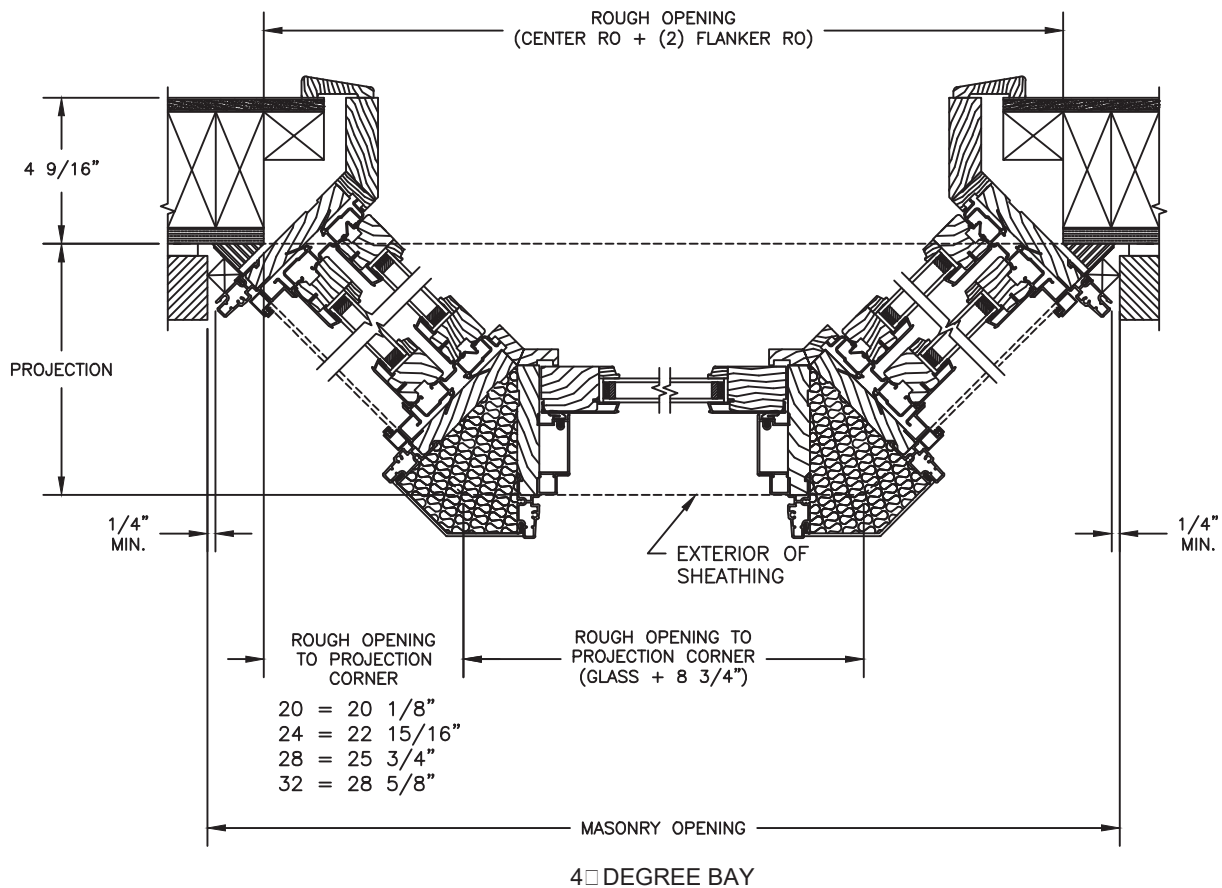
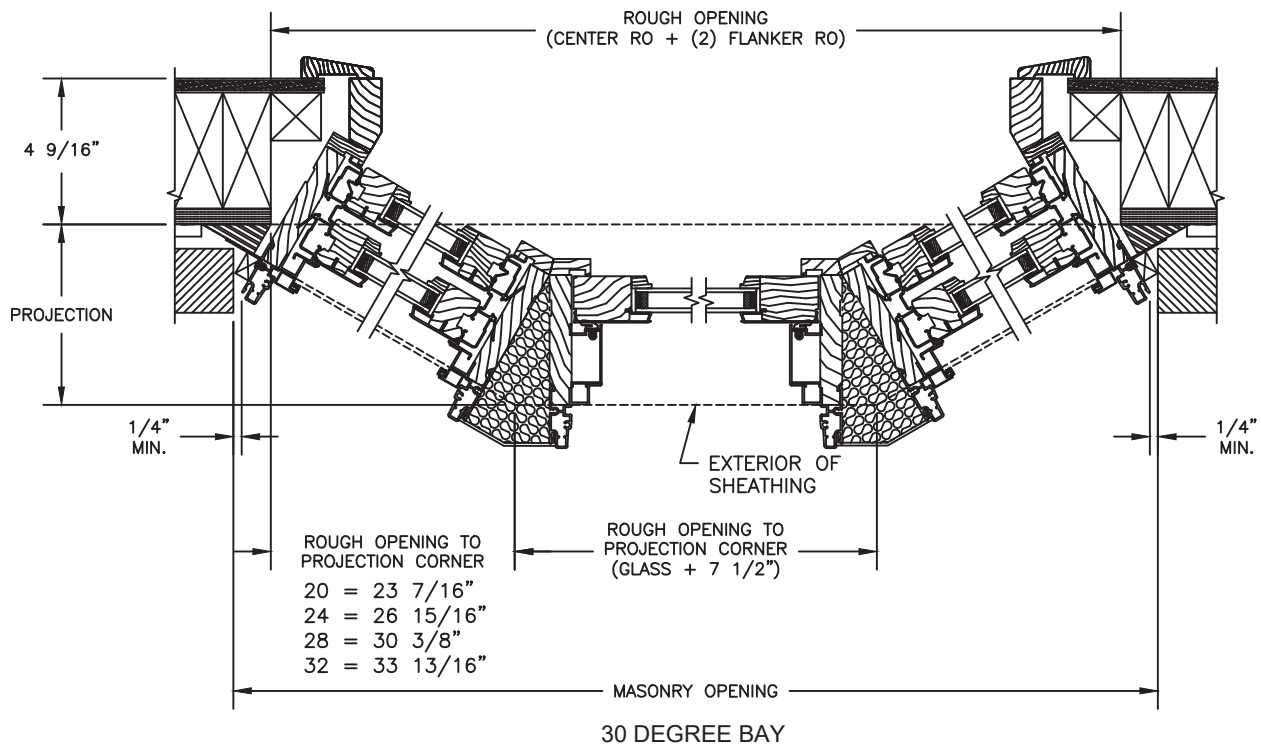


JAMB
2" CONCRETE BLOCK WALL
WITH BRICK VENEER

CLAD DOUBLE HUNG

SECTION DETAILS : 30° BAY

SCALE: 2" = 1'-0"



Pinnacle Series

CLAD DOUBLE HUNG

SPECIFICATIONS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Factory assembled aluminum clad wood double hung windows [including fixed units], glass and glazing, operable hardware, weatherstripping, insect screen, and [grilles].
- B. Anchorages, attachments, and accessories.

1.02 RELATED SECTIONS

- A. Section 01340 - Shop Drawings, Product Data, and Samples.
- B. Section 01610 - Delivery, Storage, and Handling.
- C. Section 01710 - Final Cleaning.
- D. Section 07200 - Batt and Blanket Insulation.
- E. Section 07920 - Sealants and Caulking.
- F. Section 08800 - Glass and Glazing.

1.03 REFERENCES

- A. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM):
 - 1. ASTM E-283 - Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors.
 - 2. ASTM E-547 - Water Penetration of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Difference.
 - 3. ASTM E-330 - Structural Performance of Exterior Windows, Curtain Walls, and Doors under Uniform Static Air Pressure Difference.
- B. AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA):
 - 1. AAMA/WDMA/CSA 101/I.S.2/A440-11 North American Fenestration Standard/Specification for Windows, Doors and Skylights.
- C. WINDOW & DOOR MANUFACTURERS ASSOCIATION (WDMA):
 - 1. WDMA I.S-4 – 07 Industry Standard for Water-Repellent Preservative Treatment for Millwork
- D. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
- E. NATIONAL FENESTRATION RATING COUNCIL (NFRC)

1.04 PERFORMANCE CRITERIA

- A. Patio Door units shall meet requirements in accordance with AAMA/WDMA/CSA 101/I.S.2/A440-11.
- B. Air leakage shall not exceed 0.30 cfm per sq.ft. of sash when tested in accordance with ASTM E-283 at 1.57 psf.
- C. No water penetration shall be allowed when tested in accordance with ASTM E-547.
- D. Window units shall withstand positive and negative wind loads without damage. The units shall be tested in accordance with ASTM E-330.

1.04 PERFORMANCE CRITERIA

- A. Double Hung units shall meet requirements in accordance with AAMA/WDMA/CSA 101/I.S.-2/A440-11.
- B. Air leakage shall not exceed 0.30 cfm per sq.ft. of sash when tested in accordance with ASTM E-283 at 1.57 psf.
- C. No water penetration shall be allowed when tested in accordance with ASTM E-547.
- D. Window units shall withstand positive and negative wind loads without damage. The units shall be tested in accordance with ASTM E-330.

1.05 SUBMITTALS

- A. Shop drawings shall be submitted in accordance with Section 01340.
- B. Product data in the form of general catalogs, test lab reports, product performance, and warranty information shall be submitted in accordance with Section 01340.
- C. Samples showing glazing, quality of construction, and finish shall be submitted in accordance with Section 01340.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. In compliance with Section 01610, window units shall be delivered undamaged, with protective packaging and fitted with sash shipping blocks. Complete installation and finishing instructions shall be included.
- B. Store units in a clean, dry place off the ground in an upright position.

Pinnacle Series

CLAD DOUBLE HUNG

SPECIFICATIONS

PART 2 – PRODUCTS

2.01 MANUFACTURER

- A. Pinnacle Series Aluminum Clad Wood double hung window units [including fixed units] as manufactured by Windsor Windows & Doors.

2.02 MATERIALS

- A. Frame: Shall be select softwoods treated with water repellent preservative in accordance with NWWDA I.S.-4-81, assembled with hardware installed. Exposed exterior portion shall be extruded aluminum cladding. Frame cladding sealed at corners with injected silicone and aluminum corner keys. Jamb thickness shall be 1 1/16". Jamb width shall be 4-9/16". Jamb extenders are available to match other finished wall thicknesses. Aluminum sill is thermally broken and end sealed. Vinyl hinged nailing fin and drip cap are utilized for installation. Rigid aluminum nail fin and color matched drip cap option is available. Natural Alder and Fir interior options are available. DP Upgrade units receive a 1/2" taller inside sill stop.
 - Concealed Jambliner Option: Exterior exposure shall have finished matched clad covers. Interior exposure shall have wood covers species matched to the sash/frame. The balance system shall be a block and tackle inverted balance mounted to the side jamb. A jamb jack will be standard, concealed with a removable transition dust pad. A kerf mount weatherstrip is applied to each side jamb, the entire length, providing a seal between the sash and both side jambs.
 - Standard Jambliner Option: A flexible hinge jambliner, available in white and beige. The balance system shall be a block and tackle balance mounted to the jambliner shell. The jambliner provides a tight seal to the sash. A dust pad is applied to the jambliner shell, providing a seal at the check rail assembly.
- B. Sash: Wood interior shall be select pine treated with water repellent preservative. Corners shall be coped and stapled. Exterior surfaces shall consist of aluminum extrusion with lapped corners held together by color-matched injected-molded corner keys. Foam tape is applied to the back side of glass stop. Natural Alder and Fir interior option is available. DP upgrade units shall have no finger pulls. No finger pull option is available for standard units.
- C. Finish: All aluminum exterior surfaces shall be covered with a factory applied, polyester powder-coat paint in 22 standard and 20 feature colors. Anodized colors are also available.
- D. Glazing: Shall be 3/4" double pane LoE 366 insulating glass as standard, glazed with double-faced tape plus a full perimeter bead of silicone, and interior wood stops. A wide array of other glass options is offered including clear, tinted, tempered, and obscure. Cardinal's Preserve™ option is available on all LoE 366, glass. It is a removable, factory-applied protective film adhered to both interior and exterior surfaces of the glass.
- E. Weatherstripping: Shall be closed-cell foam encased in TPE skin installed at the head and sill. A PVC-Alcryn hollow bulb applied to the inside check rail. Concealed jambliner shall have a wood parting stop with a kerf mount bulb providing a seal to the top rail. Flex back jambliner shall have a vinyl kerf mount parting stop with a hollow bulb providing a seal to the top rail.
- F. Hardware: Spring-loaded die-cast tilt latches allow both sash to be tilted in with ease. Balance system consists of a block and tackle with a locking shoe that allows for easy cleaning or removal. Flange mounted cam action locks have contemporary curved handle and concealed fasteners. One lock is used on glass widths 26" and below. Two locks are used on glass widths of 28" on up. Locks, keepers, and tilt latches all have a baked on champagne enamel finish. White, black, bronze, brass, oil-rubbed bronze, and satin nickel hardware options available.
- G. Screens: Shall be a fiberglass BetterVue™ screen set in painted aluminum frame. UltraVue™ Screen option is available. Screens are full height of opening. Screens available in 22 standard and 20 feature colors. The screen is intended to allow air and light in and keep insects out. The screen is not intended to stop children, adults or animals from falling out an open window.

Pinnacle Series

CLAD DOUBLE HUNG

SPECIFICATIONS

- H. Grilles: (Extra when specified) Colonial grilles shall be select pine with moulded edges. Stick grilles are fastened to sash with press pins, while perimeter grilles use a hidden clip system. Stick grilles and perimeter grilles are available in 7/8" or 1-1/4" widths. White, cinnamon, bronze, tan, ivory, hunter green, or black; aluminum inner grilles (in air space) are also available in 13/16" flat, 3/4" profiled, or 1" profiled. Two-toned inner grilles (3/4" profiled only) are available with a white interior, and a bronze, green, tan, ivory, or black exterior. Windsor-lite (WDL) simulates true divided lite, but is created by adhesively fixing the wood interior and aluminum exterior to the surfaces of the insulated glass. WDL is available in 7/8" and 1-1/4" standard, 5/8" putty, and 7/8" putty with standard interior. All are available with or without inner bar between the glass. Exterior bars are available in 22 standard and 20 feature colors.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that there is no visible damage to the unit before installation.

3.02 INSTALLATION

- A. Verify the rough opening is of the recommended size and that it is plumb, level, and square.
B. Install the window unit in accordance with the manufacturer's recommendations. On operating units, remove shipping blocks after unit is fully installed.
C. Install sealant, backing material, and insulation around opening perimeter in accordance with Section 07900 and Section 07920.

3.03 ADJUSTMENT AND CLEANING

- A. Operate unit and verify that all hardware operates freely. Make any adjustments necessary.
B. Cover the window unit to avoid damage due to spray paint, plaster, and other construction operations.
C. Remove all visible labels and instructions.
D. Final cleaning of glass in accordance of Section 01710.



SPECIALTY NORTH AMERICAN

400 EAST WILSON BRIDGE RD

WORTHINGTON

OH 43085

Phone: 614-505-7336

Fax: 1-614-505-7342

Customer
Quote

Short Form
No Pricing
QUOTE EXPIRES

N/A

QUOTE DATE
Quote Not Ordered

BID BY

Customer Information:

Delivery Information:

PRICE BOOK

Price Book 2017

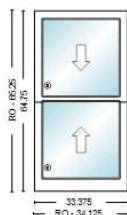
CREATED

2/13/2017
vellis@snaohio.com

PK # 219

QUOTE #	STATUS	CUSTOMER PO#	DATE PRINTED
1088727	None		2/13/2017 16:32 PM
CUSTOMER JOB NAME	TERMS	QUOTE NAME	PROJECT NAME
		DUBLIN-OFFICE	DUBLIN-OFFICE

Line #	Room ID	Quantity	Overall RO	Overall Frame
100	None Assigned	1	34 1/8" X 65 1/4"	33.375" X 64.75"



Pinnacle Clad White Double Hung 2828-1 Complete Unit LoE 366 IG 4-9/16 Jamb Ext (2604 Powder)(Setup (Standard))(Glass Stop Profile: Ogee)(Callout:2-8 x 5-2)(Pine)(Beige Jambliner) (Champagne Hardware)(No Brickmould)(White Screen - Not Applied)(BetterVue)(Energy Star: Meets in NC, SC, S Zones)(R-PG35-H) Performance Data:(U-Value: 0.3)(SHGC: 0.2)(VT: 0.46) (CR: 58)

* Units viewed from exterior.

Quote Comments:

Disclaimer:

Messages:

* Units meeting Egress size conform to 2015 IRC Section R310.2 Egress requirements; Local codes may differ. Customer is responsible to confirm units meet all applicable requirements.

Submitted By: _____ Date: _____

Accepted By: _____ Date: _____

We appreciate the opportunity to provide you with this quote!